20" TFT LCD COLOR MONITOR

Service
Service
Service

200VW8FB/00
200VW8FB/93



Service Manual

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SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING.

REFER TO BACK COVER FOR IMPORTANT SAFETY GUIDELINE.

PHILIPS

Important Safety Notice

Proper service and repair is important to the safe, reliable operation of all Philips Consumer Electronics Company** Equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly , a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

* * Hereafter throughout this manual, Philips Consumer Electronics Company will be referred to as Philips.

WARNING

Critical components having special safety characteristics are identified with a ⚠ by the Ref. No.in the parts list and enclosed within a broken line*
(where several critical components are grouped in one area) along with the safety symbol ⚠ on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability , express or implied, arising out of any unauthorized modification of design.
Servicer assumes all liability .

* Broken Line ▬ ▪ ▬ ▪ ▬

FOR PRODUCTS CONTAINING LASER :

DANGER - In visible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION - The use of optical instruments with this Product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with backlight unit

- Must mount the module using mounting holes arranged in four corners.

- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.

- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.

- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).

- Make certain that treatment persons body are grounded through wrist band.

- Do not leave the module in high temperature and in areas of high humidity for a long time.

- Avoid contact with water as it may a short circuit within the module.

- If the surface of panel become dirty, please wipe it off with a soft material.(Cleaning with a dirty or rough cloth may damage the panel.)

1. General Specification

1.1 Panel characteristic

Panel source	: AUO M201EW02_V8
	: LPL LM201WE3-TLH2
	: CPT CLAA201WA04
Screen type	: TN+film
Screen dimensions	: 20 inches (diagonal) 16:10

AUO M220EW02 V8

Resolution	: 1680 x 1050 (WXGA+)
Outside dimensions	: 459.4 (W) x 296.4 (H) x 16.6 (D)
Pixel pitch (mm)	: 0.258 x 0.258
Color pixel arrangement	: R. G. B. Vertical Stripe
Display surface	: Hard-coating (3H), Non-glare type
Color depth	: 16.7M colors
Backlight	: 4 lamps
Active area (mm)	: 433.44 (H) x 270.90(V)
View angle (CR>10)	: >= 160 for H/V (typical)
Contrast ratio	: >= 1000 : 1
White luminance	: >= 300 nits (7.0mA)
Color gamut	: >= 72%
Response time	: 5 ms

LPL LM201WE3-TLH2

Resolution	: 1680 x 1050 (WXGA+)
Outside dimensions	: 459.4 (W) x 296.4 (H) x 16.5 (D)
Pixel pitch (mm)	: 0.258 x 0.258
Color pixel arrangement	: R. G. B. Vertical Stripe
Display surface	: Hard-coating (3H), Non-glare type
Color depth	: 16.7M colors
Backlight	: 4 lamps
Active area (mm)	: 433.44 (H) x 270.90(V)
View angle (CR>10)	: >= 160 for H/V (typical)
Contrast ratio	: >= 1000 : 1
White luminance	: >= 300 nits (7.0mA)
Color gamut	: >= 72%
Response time	: 5 ms

CPT CLAA201WA04

Resolution	: 1680 x 1050 (WXGA+)
Outside dimensions	: 459.4 (W) x 296.4 (H) x 16.6 (D)
Pixel pitch (mm)	: 0.258 x 0.258
Color pixel arrangement	: R. G. B. Vertical Stripe
Display surface	: Hard-coating (3H), Non-glare type
Color depth	: 16.7M colors
Backlight	: 4 lamps
Active area (mm)	: 433.44 (H) x 270.90(V)
View angle (CR>10)	: >= 160 for H/V (typical)
Contrast ratio	: >= 1000 : 1
White luminance	: >= 300 nits (7.0mA)
Color gamut	: >= 72%
Response time	: 5 ms

1.2 Scanning frequencies

Horizontal scan range	: 30 - 93 K Hz (automatic)
Vertical scan range	: 56 - 76 Hz (automatic)

1.3 Video

Video dot rate	: < 165 M Hz (Over 165MHz, Warning message will show up)
Input impedance (Analog signal input)	
- video	: 75 ohm
- Sync	: 2.2K ohm
Input signal levels	: 700 mVpp
Sync. Input signals	: Analog R/G/B separate inputs Separate horizontal and vertical / Composite (H+V) TTL level, Sync On Green (SOG) sync 0.3Vp-p Negative
Input impedance (Digital)	: Signal TMDS link (3 channels : Rx0 & Rx1 & RX2-/+)
Video interface	: Both Analog and Digital input. It can be switching via OSD option.

1.4 Physical characteristics

Unit dimensions	
- Width	: 472.9 mm
- Height	: 400.4 mm
- Depth	: 213.6 mm
Packed unit dimensions	
- Width	: 525 mm
- Height	: 174 mm
- Depth	: 452 mm
Packed unit dimensions (China only)	
- Width	: 555 mm
- Height	: 190 mm
- Depth	: 472 mm
Weight (monitor only)	: 5.3 Kg (Including I/F cable 240g)
Title angel	: - 5 ° + 2 / - 0 ° (forward) + 25 ° + 0 / - 3 ° (backward)
Swivel angel	: nil
Height adjustment	: nil
Portrait display	: nil
AC input: - voltage	: AC 90 - 264 V,
- frequency	: 50 / 60 ± 2 Hz
Power consumption	: < 50W maximum, 43W (typ)
Ambient temperature	: 0 to 40 degree C
Operating	
- Temperature	: 5 to 35 degree C
- Humidity	: 10% to 85% (max.)
- Altitude	: 0 - 3658 m
- Air pressure	: 600 - 1000 mBAR (Recommend at 5 to 35 degree C, Humidity less then 60%)
Storage	
- Temperature	: -20 to 60 degree C
- Humidity	: 95% max
- Altitude	: 0 - 12192 m
- Air pressure	: 300 - 1100 mBAR
System MTBF	: 50,000 Hrs

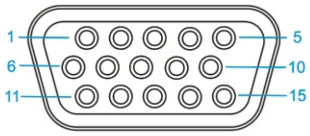
Technical Data

2. Pin Assignment

2.1 PC analog video input with D - sub connector.

Connector type of analog signal cable :
D - Sub male with DDC2B pin assignment.
Blue connector with thumb-operated jackscrews.

Pin assignment :

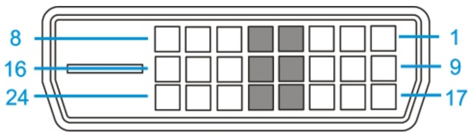


PIN No.	Signal Assignment	PIN No.	Signal Assignment	PIN No.	Signal Assignment
1	Red	6	Red GND	11	Sense (GND)
2	Green/ SOG	7	Green GND	12	Bi-directional data
3	Blue	8	Blue GND	13	H/H+V sync
4	Sense (GND)	9	DDC +3.3V or +5V	14	V-sync
5	N/A	10	Logic GND	15	Data clock

2.2 PC digital video input with DVI-D connector.

Connector type of DVI-D signal cable :
DVI-D male with DDC2B pin assignment.
White connector with thumb-operated jackscrews.

Pin assignment :



PIN No.	Signal Assignment	PIN No.	Signal Assignment	PIN No.	Signal Assignment
1	T.M.D.S. data2-	9	T.M.D.S. data1-	17	T.M.D.S. data0-
2	T.M.D.S. data2+	10	T.M.D.S. data1+	18	T.M.D.S. data0+
3	T.M.D.S. data2 shield	11	T.M.D.S. data1 shield	19	T.M.D.S. data0 shield
4	No Connect	12	No Connect	20	No Connect
5	No Connect	13	No Connect	21	No Connect
6	DDC clock	14	+5V Power	22	T.M.D.S clock shield
7	DDC data	15	Ground (for +5V)	23	T.M.D.S. clock+
8	No Connect	16	Hot plug detect	24	T.M.D.S. clock-

Automatic Power Saving

If you have VESA / DPMS compliance display card or software installed in your PC, the monitor can automatically reduce power consumption when power saving function active. And if an input from keyboard, mouse or other devices is detected, the monitor will automatically wake up. The following table shows the power consumption and signaling of this automatic power saving feature:

Mode	HSYNC	VSYNC	Video	Pwr-cons.	Indication	Rec. time
Power-On	On	On	active	< 50W (<54W : for audio model)	Green LED	--
Off	Off	Off	blanked	< 1 W	Amber LED	< 5 s
DC Power Off			N/A	< 1 W	LED Off	

This monitor must comply with the Microsoft On Now specification, with two power management states, as defined by the VESA DPMS document. And must appropriately display the DPMS states. Also comply with Environmental Protection Agency (EPA) Energy Star and TCO03 power management standard strictly.

ENERGY STAR is a U.S. Registered mark. AS AN ENERGY STAR PARTNER, PHILIPS HAS DETERMINED THAT THIS PRODUCT MEETS THE ENERGY STAR GUIDELINES OF ENERGY EFFICIENCY.

Data Storage

Factory preset mode:

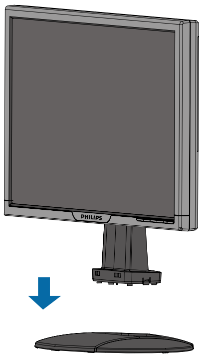
This monitor has 18 factory-preset modes as indicated in the following table:

Item	Resolution	H. freq/ V. freq	Standard
1	640*350	31.469 KHz/70.086 Hz	IBM VGA 10H
2	720*400	31.469 KHz/70.087 Hz	IBM VGA 3H
3	640*480	31.469 KHz/59.94 Hz	IBM VGA 12H
4	640*480	35 KHz/67 Hz	MACINTOSH
5	640*480	37.5 KHz/75 Hz	VESA
6	800*600	35.0156 KHz/56.25 Hz	VESA
7	800*600	37.879 KHz/60.317 Hz	VESA
8	800*600	46.875 KHz/75 Hz	VESA
9	1024*768	48.363 KHz/60.004 Hz	VESA
10	1024*768	60.023 KHz/75.029	VESA
11	1280*1024	63.981 KHz/60.02 Hz	VESA
12	1280*1024	79.976 KHz/75.025 Hz	VESA
13	1440*900	55.469 KHz/59.901 Hz	VESA
14	1440*900	55.935 KHz/59.887	VESA
15	1440*900	70.635 KHz/74.984 Hz	VESA
16	1920*1080	66.587 KHz/60 Hz	CVT 2.3 MA-R
17	1680*1050	65.29 KHz/60 Hz	CVT 1.76 MW
18	1680*1050	65.29 KHz/60 Hz	CVT 1.76 MW-R

1. Connection to PC

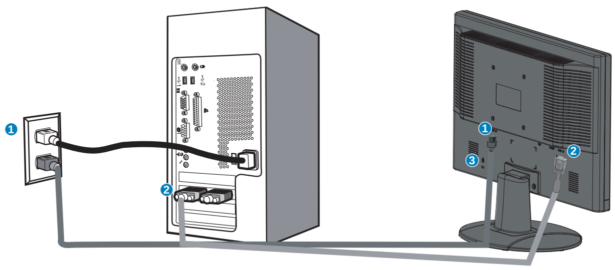
Please follow the steps to connect your LCD Monitor to PC.

a. Assembly LCD Monitor with base



b. Connect to PC

1). Turn off your computer and unplug its power cable.
2). Connect the monitor signal cable to the video connector on the back of your computer.
3). Plug the power cord of your computer and your monitor Into a nearby outlet.
4). Turn on your computer and monitor. If the monitor displays an image, installation is complete.



Port definition:
(1) AC power input
(2) VGA input
(3) Kensington anti-thief lock

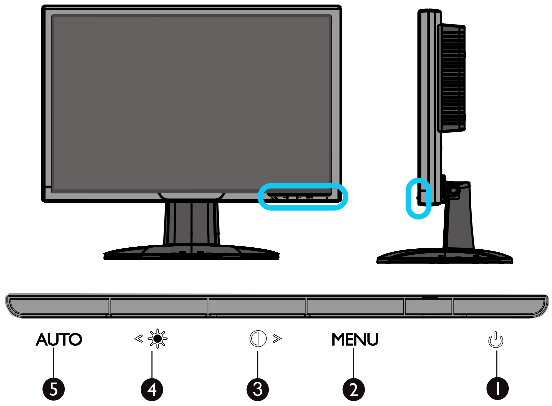
Set your Monitor at 1680*1050@60Hz for best performance.

c. Accessory Pack



Power cord	VGA cable	EDFU CD

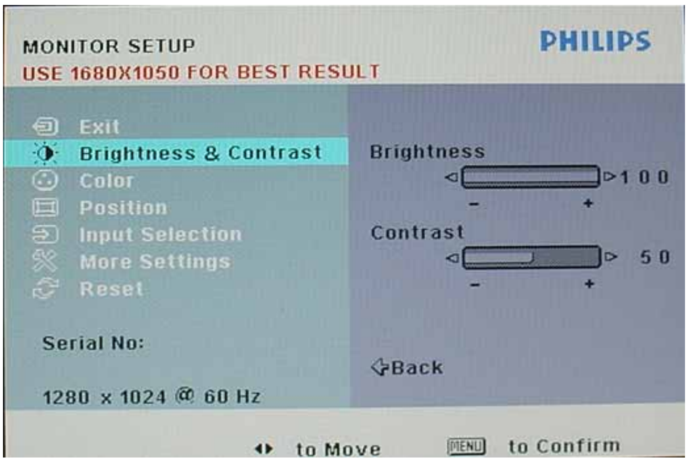
2. Function key definition



(1) To switch monitor's power on and off
(2) To access OSD menu
(3) Hot key of contrast adjustment and to adjust OSD value up when OSD menu is active
(4) Hot key of brightness adjustment and to adjust OSD Value down when OSD menu is active
(5) Automatically adjust the horizontal position, vertical position, phase and clock settings

3. Description of the On Screen Display

On-Screen Display(OSD) is a feature in all Philips LCD monitors. It allows and end user to adjust screen performance or select functions of the monitors directly through an on-screen instruction window. A user friendly on screen display interface is shown as below:



Basic and simple instruction on the control keys.

According to the above OSD structure, users can :
press **<** or **>** buttons to move the cursor,
press **MENU** button to confirm the choice or change,
press **<** or **>** button to adjust the value,
press **MENU** button to save the changes.
press **AUTO** button to automatically adjust the horizontal position, vertical position, phase and clock setting.

4. The OSD tree

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

4.1 Only available for Europe Model

Main Menu (1st Level) | Sub Menu (2nd Level)

- Exit
- Brightness & Contrast
  - Brightness
  - Contrast
  - Back
- Color
  - Original Color
  - 9300K
  - 6500K
  - User Define
    - Red
    - Green
    - Blue
  - Back
- Position
  - Horizontal
  - Vertical
  - Back
- Input selection
  - Analog
  - Digital
  - Back
- More Settings
  - Language
    - English
    - Español
    - Français
    - Deutsch
    - Italiano
    - Русский
    - Back
  - Phase/Clock
    - Phase
    - Clock
    - Back
  - OSD Settings
    - Horizontal
    - Vertical
    - Back
  - Back
- Reset
  - No
  - Yes

4.2 Only available for Nafta Model

Main Menu (1st Level) | Sub Menu (2nd Level)

- Exit
- Brightness & Contrast
  - Brightness
  - Contrast
  - Back
- Color
  - Original Color
  - 9300K
  - 6500K
  - User Define
    - Red
    - Green
    - Blue
  - Back
- Position
  - Horizontal
  - Vertical
  - Back
- Input selection
  - Analog
  - Digital
  - Back
- More Settings
  - Language
    - English
    - Español
    - Français
    - Portugues
    - 中文
    - Back
  - Phase/Clock
    - Phase
    - Clock
    - Back
  - OSD Settings
    - Horizontal
    - Vertical
    - Back
  - Back
- Reset
  - No
  - Yes

4.3 Only available for Asia Pacific Model

Main Menu (1st Level) | Sub Menu (2nd Level)

- Exit
- Brightness & Contrast
  - Brightness
  - Contrast
  - Back
- Color
  - Original Color
  - 9300K
  - 6500K
  - User Define
    - Red
    - Green
    - Blue
  - Back
- Position
  - Horizontal
  - Vertical
  - Back
- Input selection
  - Analog
  - Digital
  - Back
- More Settings
  - Language
    - English
    - Español
    - Français
    - Deutsch
    - Italiano
    - 中文
    - Back
  - Phase/Clock
    - Phase
    - Clock
    - Back
  - OSD Settings
    - Horizontal
    - Vertical
    - Back
  - Back
- Reset
  - No
  - Yes

Note:

sRGB is a standard for ensuring correct exchange of colors between different devices(e. g. Digital cameras, monitor, printers, scanners, etc.)

Using a standard unified color space, sRGB will help represent pictures taken by an sRGB compatible device correctly on your sRGB enabled Philips monitor. In that way, the colors are calibrated and you can rely on the correctness of the colors shown on your screen.

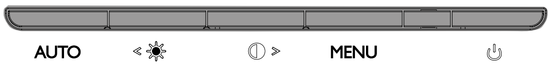
Important with the use of sRGB is that the brightness and contrast of your monitor is fixed to a predefined setting as well as the color gamut. Therefore it is important to select the sRGB setting in the monitor’s OSD.

To do so, open the OSD by pressing the OK button on the side of your monitor. More the down button to go to color and press OK again. Use the right button to go to sRGB. Then move the down button and press OK again to exit the OSD.

After this, please do not change the brightness or contrast setting of your monitor. If you change either of these, the monitor will exit the sRGB mode and go to a color temperature setting of 6500K.

Advanced OSD Adjustment

1. Front control panel



2. To Lock/Unlock OSD function

The OSD function can be locked by pressing **MENU** button for more than 10 seconds, the screen shows following windows for 3 seconds.

Every time when you press any button, this message appears on the screen automatically.

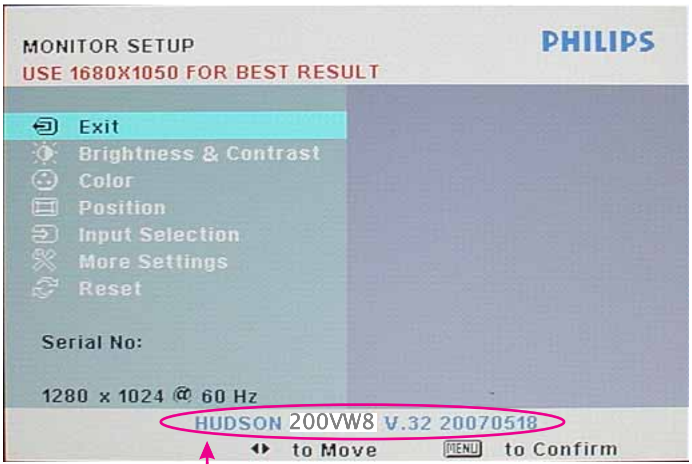
ATTENTION
OSD MAIN CONTROLS LOCKED

Locked OSD function can be released by pressing **MENU** button for more than 10 seconds. While press **MENU** button for OSD unlocked purpose, the screen will keep showing OSD MAIN MENU LOCKED until OSD function unlocked and screen automatically shows following window for 3 seconds.

ATTENTION
OSD MAIN CONTROLS UNLOCKED

3. Access Factory Mode

To hold **AUTO** and **POWER** buttons, you can saw the LED light flashing at this time. Then release the **AUTO** button and Keep pressing the **POWER** button. The monitor will power on and LED light give out orange light. Press **MENU** to bring up OSD menu for confirmation as below:



If this message appeared, means monitor already entered the factory mode.

4. Entering Burn-in mode and others

If you access into factory mode, press **<** or **>** button to move the cursor on the message bar of " HUSDON 200VW8 V.32.". Then press **MENU** to confirm, OSD menu will convert into another format as below:

BIOS Revision　Scaler IC Type　Panel Type　BIOS issued date

V.32	TSUMU58WHJ	LM201WE3-TLH2	05/18/07				
Burn in		Off					
AutoColor							
Con		50					
Bri		100					
Gain	R	88	G	91	B	88	
Offset	R	121	G	131	B	131	
sRGB	R	97	G	98	B	82	
9300K	R	91	G	94	B	95	
6500K	R	97	G	98	B	82	
Color Update							
Fatory Reset							

Move the cursor by **MENU** button, and press the **<** or **>** button to change the burn-in mode from Off to ON.

Leave factory mode by simply power off the monitor.

Warning

* If you only want to enter burn in mode, please don't change any other setting items as above listed.
* Unfortunately, if some settings has been changed by unknown reasons or wrong operation. Please refer to the chapter of "W/B Adjustment" to guide the operator how to restore the default settings or do adjustment.

Appendix:

Explanation of above listed selections.

Selection	Description
Burn in On/Off	Enter Aging Mode
Auto Color	Auto Color Adjustment
Con	Contrast Adjustment
Bri	Brightness Adjustment
Gain	ADC Gain Value Adjustment (Auto adjustment by H/W when implement Auto Color function)
Offset	ADC Offset Value Adjustment (Auto adjustment by H/W when implement Auto Color function)
sRGB	sRGB Color Temperature Gain Value Adjustment
9300K	9300K Color Temperature Gain Value Adjustment
6500K	6500K Color Temperature Gain Value Adjustment
Color Update	Save All of Color Temperature Gain Value
Factory Reset	Memory Recall to Factory Default Settings

OSD Attention Signals

Clock & Phase Adjustment

Due to the different quality of video signal generated from graphics cards. It is necessary to adjust CLOCK and PHASE functions for the optimal video display of LCD monitor. So maybe some flicker appeared as Fig.1 & 2.



Fig.1

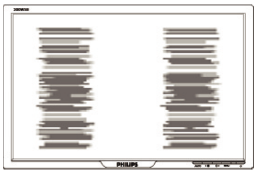


Fig.2

Following steps will guide you to make correct adjustment of CLOCK and PHASE:

a. Restart your computer.
b. Press **MENU** to bring up OSD menu after the OS (Operation System) boot up.
c. Press **<** or **>** to select the option of **More Settings** and then press **MENU** to bring up its submenu as shown in Fig.3.
d. Select the **Clock** or **Phase** adjustment items in submenu and press **<** or **>** to adjust.
(If the phenomenon as Fig.1, you should adjust "**Phase**")
(If the phenomenon as Fig.2, you should adjust "**Clock**")
e. Quit OSD by press **MENU** button to save the settings.

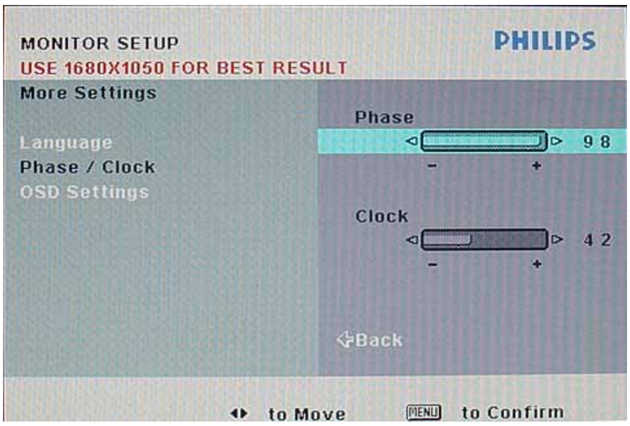


Fig.3

However, CLOCK and PHASE functions are only available while analog video signal is supplied. Operating unit under digital signal state, the video clock information can be obtained from graphics cards directly. Therefor, it is unnecessary to adjust these functions.

OSD Attention signal

The monitor will detect various display situation automatically. When the monitor detects the problems, the screen will show the different warning signals to remind you what is happen to your monitor.

1. NO VIDEO INPUT
This screen appears if there is no video signal input. Please check that the signal cable is properly connected to the video card of PC and make sure PC is on.

ATTENTION
NO VIDEO INPUT

2. CANNOT DISPLAY THIS VIDEO MODE
This screen warns then the input frequency from the computer is not a standard video mode or out of the monitor's scanning range. Please change the display results.

ATTENTION
CANNOT DISPLAY THIS VIDEO MODE, CHANGE COMPUTER DISPLAY INPUT TO 1680X1050 @60HZ

3. ENTERING SLEEP MODE
This screen appears when the monitor is about to enter the sleep mode. Please press any key on the keyboard or click the mouse to wake up the monitor and computer.

ATTENTION
ENTERING SLEEPING MODE

4. WAIT FOR AUTOMATIC ADJUSTMENT
This screen appears when you touch the **AUTO** button. It will disappear when the monitor is properly adjusted.

ATTENTION
WAITING FOR AUTOMATIC ADJUSTMENT

5. USE 1680*1050 FOR BEST RESULT
This message appears at the top of the OSD window when the video mode input is not the recommended 1680*1050. Other modes may result in some picture distortion. Please adjust the video mode to 1680*1050 at 60Hz for best display quality.

ATTENTION
USE 1680 X 1050 FOR BEST RESULT

6. SELECTED INPUT NOT AVAILABLE
When you select video input between analog or digital signal via INPUT SELECTION function of OSD menu, if the one you are selecting is not available, following message will appear on the screen then switching back to the previous setting automatically.

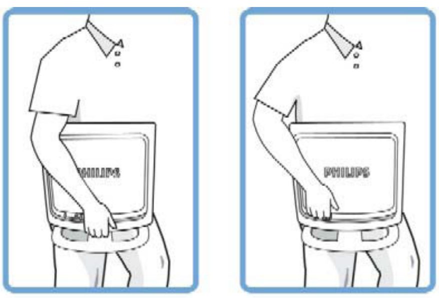
ATTENTION
SELECTED INPUT NOT AVAILABLE

Safety precautions and maintenance

WARNING: Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

Read and follow these instructions when connecting and using your computer monitor:

a. To protect your display from possible damage, do not put excessive pressure on the LCD panel. When moving your monitor, grasp the frame to lift; do not lift the monitor by placing your hand or fingers on the LCD panel.
b. Unplug the monitor if you are not going to use it for an extensive period of time.
c. Unplug the monitor if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use alcohol, solvents or ammonia-based liquids.
d. Consult a service technician if the monitor does not operate normally when you have followed the instructions in this manual.
e. The casing cover should be opened only by qualified service personnel.
f. Keep the monitor out of direct sunlight and away from stoves or any other heat source.
g. Remove any object that could fall into the vents or prevent proper cooling of the monitor's electronics.
h. Do not block the ventilation holes on the cabinet.
i. Keep the monitor dry. To avoid electric shock, do not expose it to rain or excessive moisture.
j. When positioning the monitor, make sure the power plug and outlet are easily accessible.
k. If turning off the monitor by detaching the power cable or DC power cord, wait for 6 seconds before attaching the power cable or DC power cord for normal operation.
l. To avoid the risk of shock or permanent damage to the set, do not expose the monitor to rain or excessive moisture.
m. IMPORTANT: Always activate a screen saver program during your application. If a still image in high contrast remains on the screen for an extended period of time, it may leave an 'after-image' or 'ghost image' on front of the screen. This is a well-known phenomenon that is caused by the shortcomings inherent in LCD technology. In most cases, the afterimage will disappear gradually over a period of time after the power has been switched off. Be aware, that the afterimage symptom cannot be repaired and is not covered under warranty.
o. Warning for lifting monitor - Do not use the area underneath the logo cover to grip or lift the monitor. Placing weight on the logo cover can cause it to break away from the body and cause the monitor to fall. When lifting the monitor, place one hand under the monitor's frame.



○ Do ✕ Don't

* Consult a service technician if the monitor does not operate normally when the operating instructions given in this manual have been followed.

Installation Locations

Avoid exposure to heat and extreme cold.

Do not store or use the LCD monitor in locations exposed to heat, direct sunlight or extreme cold.

Avoid moving the LCD monitor between locations with large temperature differences. Choose a site that falls within the following temperature and humidity ranges.
Temperature: 0-35°C 32-95°F
Humidity: 20-80% RH

Do not subject the LCD monitor to severe vibration or high impact conditions. Do not place the LCD monitor in the trunk of a car.

Take care not to mishandle this product by either knocking or dropping it during operation or transportation.

Do not store or use the LCD monitor in locations where there is a high level of humidity or in dusty environments. Do not allow water or other liquids to spill on or into the LCD monitor.

Trouble Shooting

This page deals with problems that can be corrected by the user. If the problem still persists after you have tried these solutions, contact your nearest Philips dealer.

Common Problems	
Having this problem	Check these items
No Picture (Power LED not lit)	a. Make sure the power cord is plugged into the power outlet and into the back of the monitor. b. First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.
No Picture (Power LED is amber or yellow)	a. Make sure the computer is turned on. b. Make sure the signal cable is properly connected to your computer. c. Check to see if the monitor cable has bent pins. d. The Energy Saving feature may be activated.
Screen says ATTENTION ENTERING SLEEPING MODE	a. Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Set-Up Guide). b. Check to see if the monitor cable has bent pins. c. Make sure the computer is turned on.
Screen says ATTENTION CANNOT DISPLAY THIS VIDEO MODE, CHANGE COMPUTER DISPLAY INPUT TO 1680X1050 @60HZ	a. Make sure the vertical sync of input signal is within the range of 56 ~ 75 Hz. b. Change the refresh rate to 56~75Hz within 10 minutes. c. Re-power on monitor to start over again if you failed to change the refresh rate within 10 minutes.
AUTO button not working properly	a. The Auto Function is designed for use on standard Macintosh or IBM-compatible PCs running Microsoft Windows. b. It may not work properly if using nonstandard PC or video card. c. The AUTO adjustment does not function when digital input is used for display.
Imaging Problems	
Display position is incorrect	a. Press the Auto button. b. Adjust the image position using the Horizontal Position and/or Vertical Position in OSD Main Controls.
Image vibrates on the screen	a. Check that the signal cable is properly connected to the graphics board or PC.
Vertical flicker appears	a. Press the Auto button. b. Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
Horizontal flicker appears	a. Press the Auto button. b. Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.

Definition of Pixel Defects

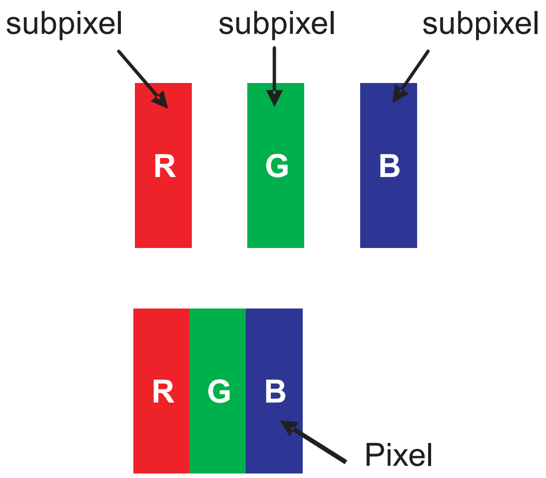
The screen is too bright or too dark	Adjust the contrast and brightness on OSD Main Controls. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker,please contact your dealer).
An after-image appears	If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave an after-image. This usually disappears after a few hours.
An after-image remains after the power has been turned off	This is characteristic of liquid crystal and is not caused by a malfunction or deterioration of the liquid crystal. The after-image will disappear after a peroid of time.
Green, red, blue, dark, and white dots remains	The remaining dots are normal characteristic of the liquid crystal used in today's technology.
For further assistance, refer to the Consumer Information Centers list and contact your local Philips distributor.	

Definition of Pixel Defects

This section explains the different types of pixel defects and defines acceptable defect levels of each type. In order to quality for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels.

1. Definition of Pixels and Sub-pixels

A pixel, or picture element, is composed of three sub pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub pixels of a pixel are lit, the three colored sub pixels together appear as a single white pixel. When all are dark, the three colored sub pixels together appear as a single black pixel. Other combinations of lit and dark sub pixels appear as single pixels of other colors.



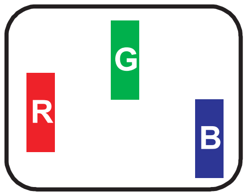
2. Types of Pixel Defects

Pixel and sub pixel defects appear on the screen in different ways. There are two categories of pixel defects and several types of sub pixel defects within each category.

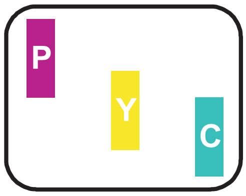
Bright Dot Defects

Bright dot defects appear as pixels or sub pixels that are always lit or 'on'. That is, a bright dot is a sub-pixel that stands out on the screen when the monitor displays a dark pattern. There are the types of bright dot defects:

One lit red, green or blue sub pixel



Two adjacent lit sub pixels:
- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



Three adjacent lit sub pixels
(one white pixel)

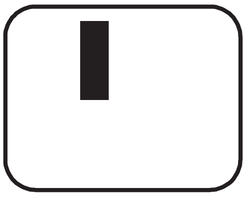


A red or blue bright dot must be more than 50 percent brighter than neighboring dots while a green bright dot is 30 percent brighter than neighboring dots.

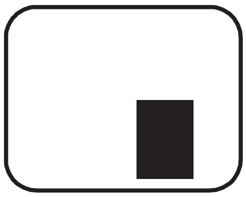
Black Dot Defects

Black dot defects appear as pixels or sub pixels that are always dark or 'off'. That is, a dark dot is a sub-pixel that stands out on the screen when the monitor displays a light pattern. These are the types of black dot defects:

One dark sub pixel



Two or three adjacent dark sub pixels



3. Proximity of Pixel Defects

Because pixel and sub pixels defects of the same type that are near to one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects.
Perfect Panel - ISO 13406-2 Class II compliant do-defect-free-display.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	*200VW8*
1 lit subpixel	3
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	15 mm
Total bright dot defects of all types	3

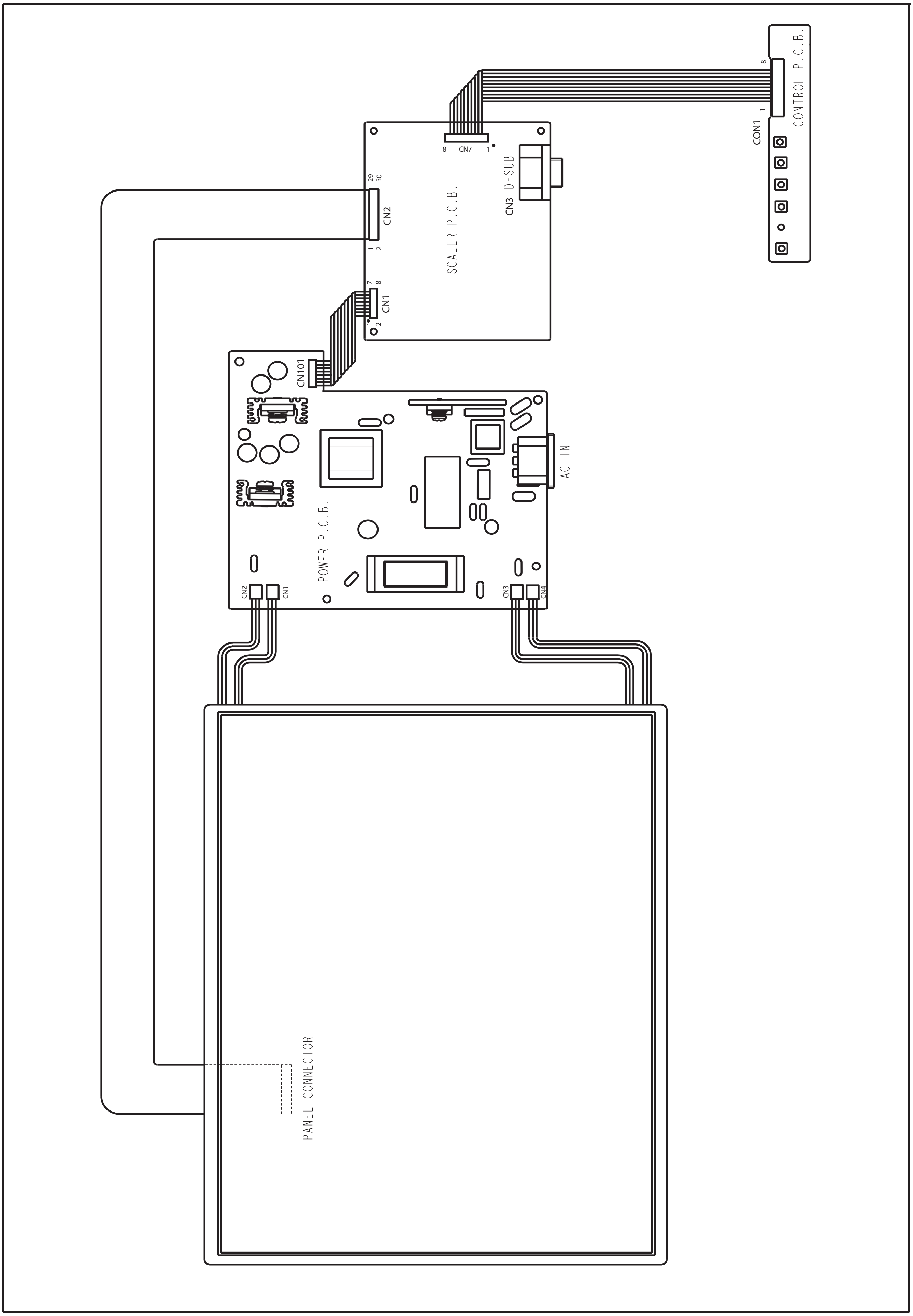
BLACK DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	*200VW8*
1 dark subpixel	5
2 adjacent dark subpixels	2
3 adjacent dark subpixels	0
Distance between two black dot defects*	15 mm
Total black dot defects of all types	5

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	*200VW8*
Total bright or black dot defects of all types	5

Note:

* 1 or 2 adjacent sub pixel defects = 1 dot defect

Wiring Diagram



1. Put down the monitor softly and take out the base from it.(note: care of the panel without scraped.)



Fig. 1

2. Release 2pcs screws from rear cover, and release 2pcs screws from hinge cover too, then take off hinge cover.



Fig. 2

3. Release 2pcs screws from stand and take off it stand.



Fig. 3

4. Release 2pcs screws from bottom of rear cover, then take off the rear cover.



Fig. 4

5. Release 3pcs screws from left side of bezel.



Fig. 5

6. Release 3pcs screws from right side of bezel.

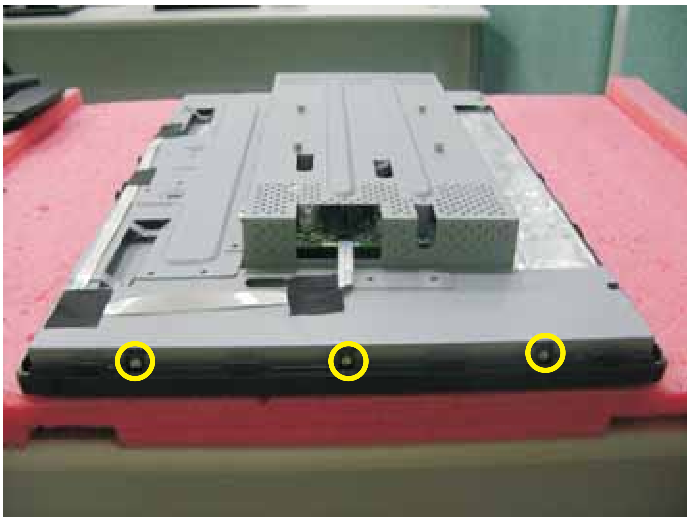


Fig. 6

Mechnical instructions

7. Tear off all the tapes and AL FOIL, and disconnect the cable between Main/B and Bottom/B.

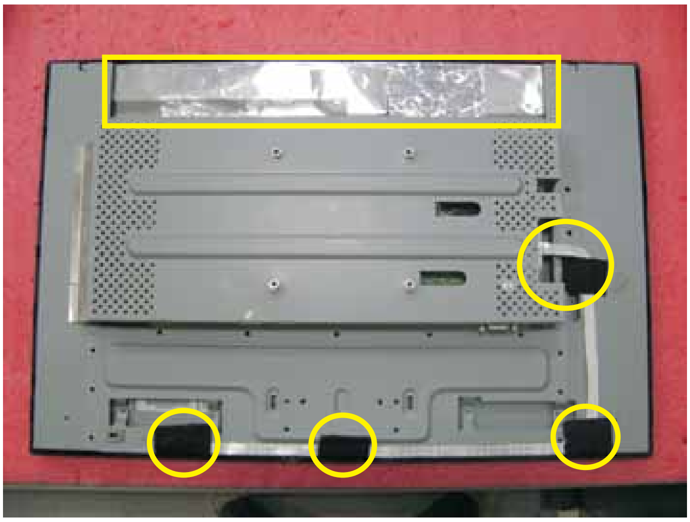


Fig. 7

8. Release 1pcs screw from POWER/B shielding, and take off it.



Fig. 8

9. Separate the bezel from panel.



Fig. 9

10. Release 3pcs screws from Button/B, and take off it.



Fig. 10

11. Release 2pcs screws from left side of PCB shielding.



Fig. 11

12. Release 2pcs screws from right side of PCB shielding.

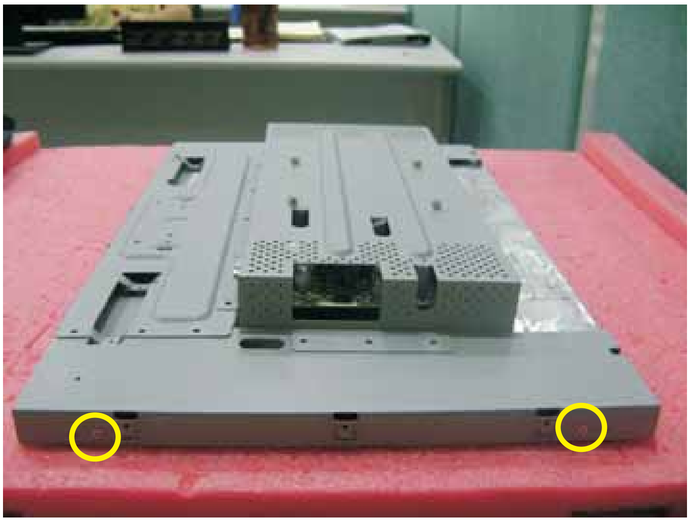


Fig. 12

13. Disconnect the lamp cables from Power/B.



Fig. 13

14. Disconnect the LVDS cable from panel.



Fig. 14

15. Separate the PCB shielding from panel.



Fig. 15

16. Release 7pcs screws from Main/B and Power/B and take off the Power mylar.

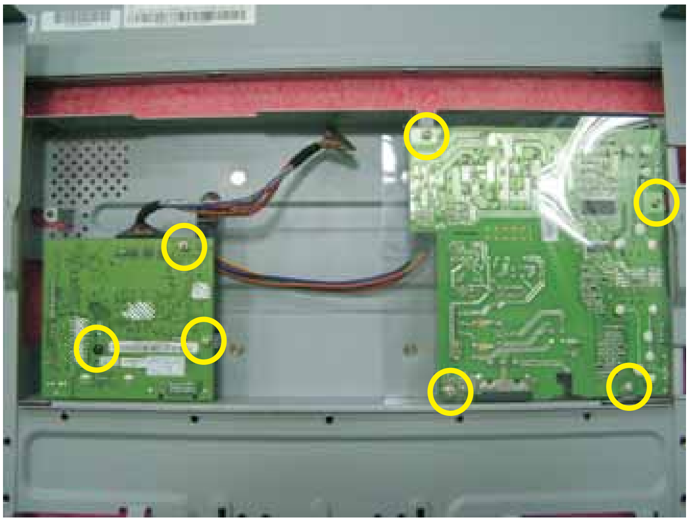


Fig. 16

17. Release 2pcs IO NUT from VGA joint of Main/B.



Fig. 17

18. Disconnect the Main/B and Button/B.

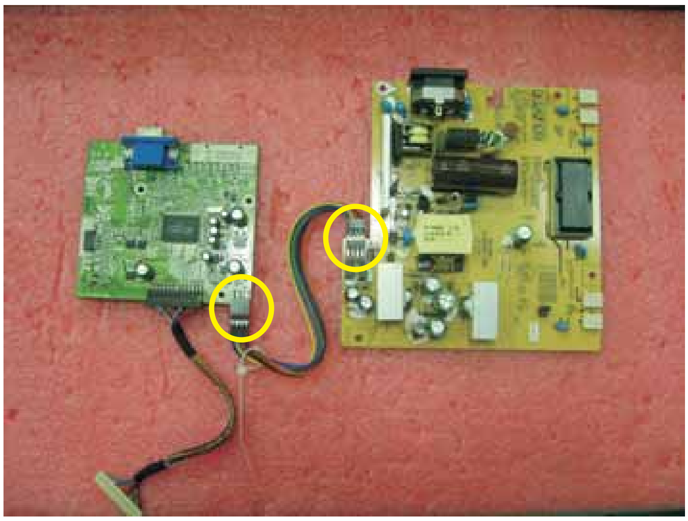


Fig. 18

Electronic Instructions

F/W upload instruction

Configuration and procedure (ISP Tool)

"ISP Tool " software is provided by Mstar to upgrade the firmware of Scaler IC. It is a windows-based program, which cannot be run in MS-DOS.

System and equipment requirements:
1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 98/2000/XP.
3. ISP software " ISP Tool ".
   (No need to install, it can be performed directly)
4. Firmware uploading tool, as shown in Fig1.

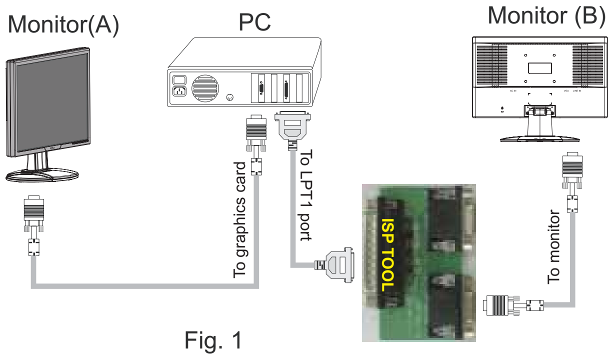


Fig. 1

* Connect the firmware uploading tool as Fig.1 shown.
* Before the servicer perform the ISP Toll program, the Communicating connection must be well done.
* When the connection fixed, power on the monitor.

Setup and perform the ISP Tool program

1. Save the software in your PC, and create a shortcut on the desktop.

2. Double click the ISP Tool. exe icon at the desktop then appears window as shown in Fig. 2.



Fig. 2

3. Press the device icon then select the matching IC type and double click it as shown in Fig. 3.

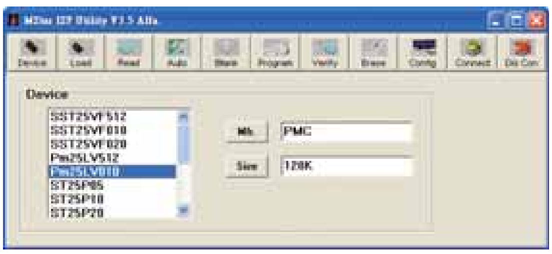


Fig. 3

4. Press the read icon, file status will shown the start address as 0X00000 and end address as 0X1FFFF. Then open the destination hex files as shown in Fig.4.

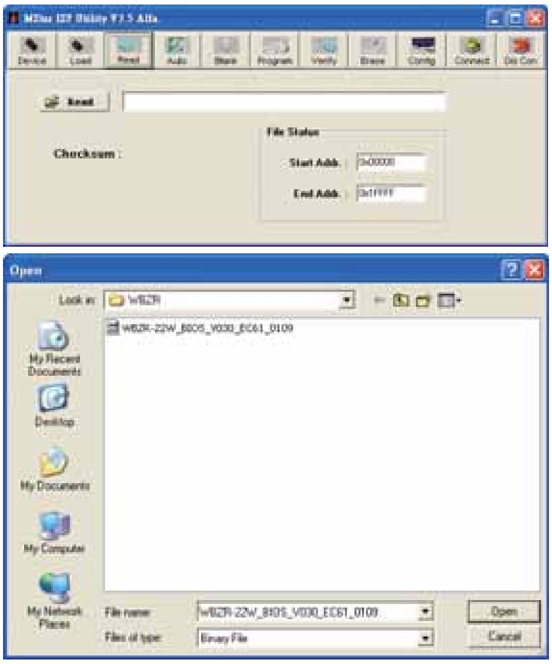


Fig. 4

5. If the hex file opened correctly, a message will be showed in the dialog box to notice the operator. At this moment, please verify the checksum of the hex file with the firmware control table to make sure the suitable file will be used. Mentioned firmware control table will be provided by supplier(Fig.5)

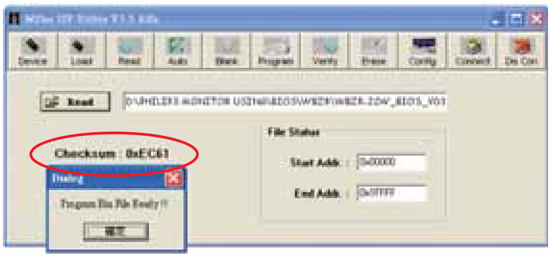


Fig. 5

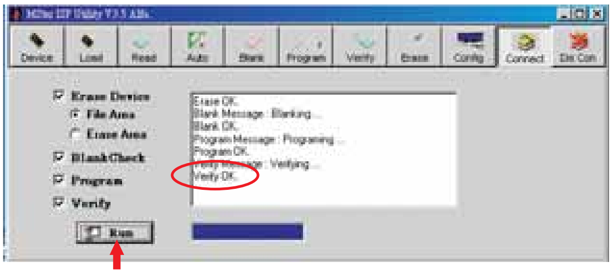
6. Press the config icon to setting up:
   Port type : LPT1
   Base Addr : 0X0378
   E2PROM device setting : 50 (default value)



7. Press connect icon to create a linkage between PC and monitor. If the linkage was steady, a dialog box will shown as Fig. 6. At this moment, LED of monitor will be black out.



7. Press **AUTO** icon of the toolbox and make sure all of the setting are fixed, then press the **RUN** icon. Program will perform the loading process automatically.



8. When the loading process completed, and the dialog box appeared the message of verify ok. Press the **DIS-CON** icon to disconnect the linkage, LED of monitor will light up.

DDC instructions

General

DDC Data Re-programming
In case the DDC data memory ICwhich storage all factory settings were replaced due to a defect, the serial numbers have to be re-programmed.
It is advised to re-soldered DDC IC from the old board onto the new board if circuit board have been replaced, in this case the DDC data does not need to be re-programmed.

* According to the design concept of this product, DDC data will be divided into two parts to deposit in different place:
DDC data of VGA interface are saved in scaler IC.

Additional information
Additional information about DDC (Display Data Channel) may be obtained from Video Electronics Standards Association (VESA). Extended Display Identification Data(EDID) information may be also obtained from VESA.

System and equipment requirements
1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 98/2000/XP.
3. Installation software of " TVI Tool ".
4. Executive program " TVI Tool. exe ".
5. ISP tool kit, as shown in Fig1.
   Including: a. Alignment fixture x 1
   b. Printer cable (LPT type) x 1
   c. D-sub to D-sub cable x 1

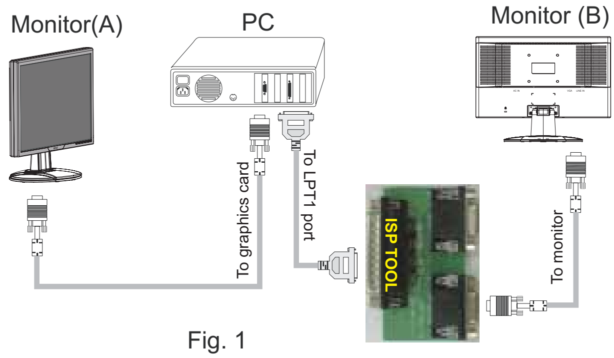


Fig. 1

Install and setup **TVI-TOOL** program

Step 1: Create a folder in your PC, for example : D:\TVI-TOOL.
Step 2: Copy the installation file into the folder.
Step 3: Double click the INSTALL icon as shown in the Fig.2.



Step 4: Following the installation wizard, complete the whole installing progress.
Step 5: Restart your PC to
(More details are shown in the next page)

Electronic Instruction

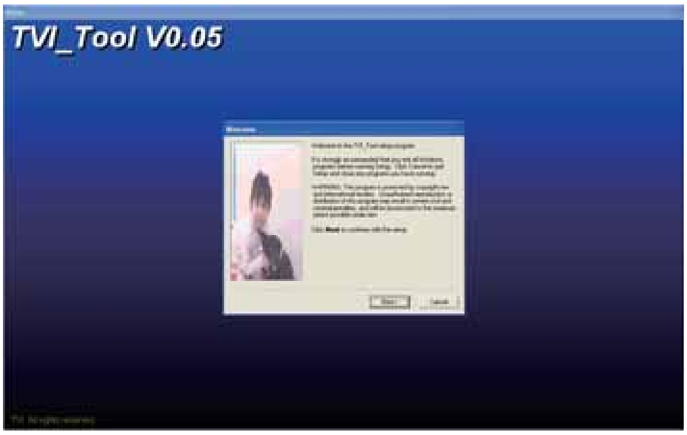


Fig.1 (Installation interface)



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6



Fig.7



Fig.8



Fig.9

Re-programming Analog DDC

Step 1: After initialize the alignment fixture, connecting all cables as shown in Fig.10.

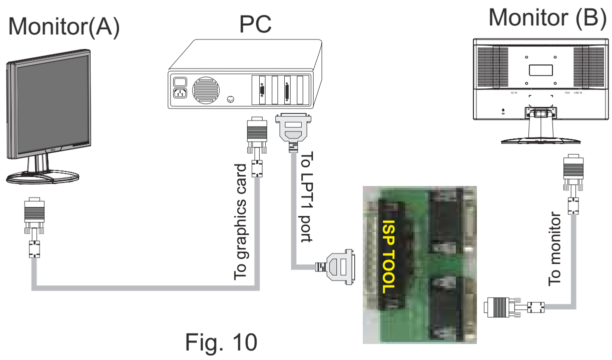


Fig. 10

Step 2: Connect the power code of monitor and power on it.

Step 3: Double check the **TVI_TOOL** icon to run the TV_TOOL.exe.



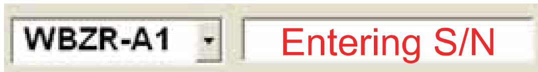
Step 4: Click the **OPEN** icon at the main menu to open the DDC files.



Step 5: Select the icon of DDC IC type and serial number write-in method.



Step 6: Entering the monitor's serial number into the block as shown in following photos, program will running Automatically.



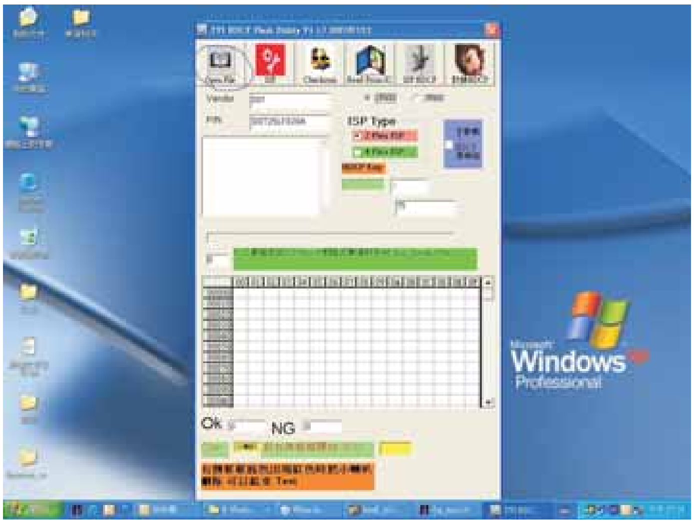
Step 7: When the DDC data download into the DDC IC, a dialog box will be appeared automatically as shown in below photos.



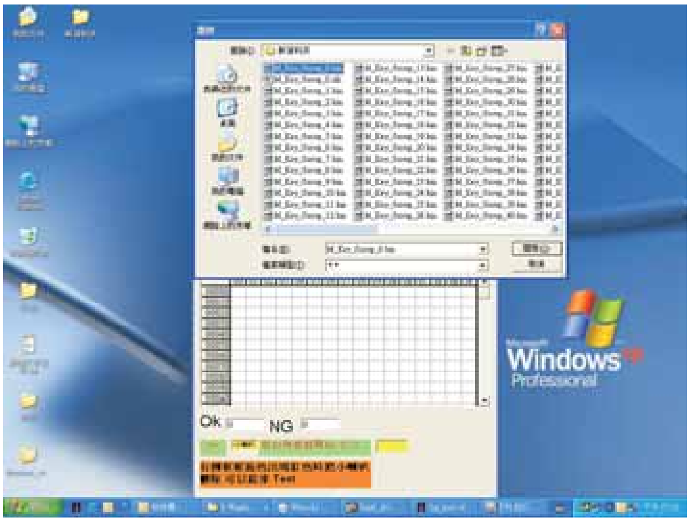
Step 8: Press the OK button, waiting for several seconds and then power off the monitor.

Re-programming of writing HDCP KEY

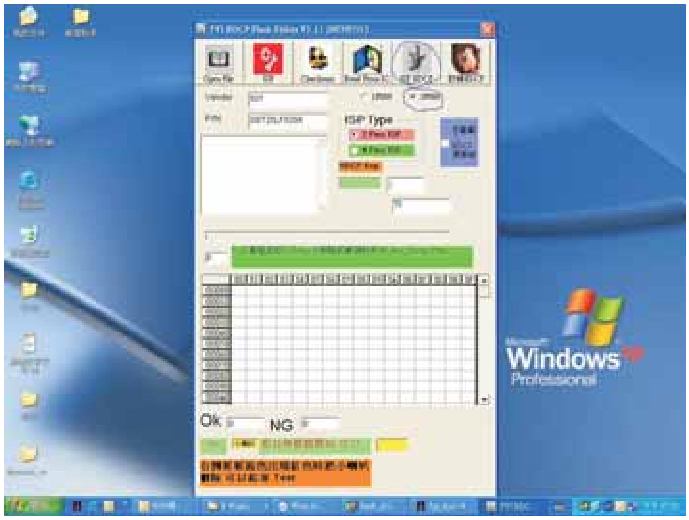
Step 1: Please install the software of isp HDCP key Version1.13 ,the tool is the same with isping EDID.
Step 2: Opening the software.
Step 3: Pressing the button of "OPEN FILE", as follows:



Step 4: Choosing the HDCP KEY that you save:



Step 5: If the Flash Rom of monitor is 2MB, please choose"3F000",but if it is 1MB please choose 1F000(if you choose amiss ,the monitor maybe shut down) ,then press the button of "ISP HDCP".



Step 6: The software will write HDCP KEY into monitor.



Step 7: If the software write HDCP KEY into monitor successfully ,the message will be display ,as follow , if the software write HDCP KEY into monitor unsuccessfully ,please check the cable ,and restart from step5 .



DDC data

DDC DATA

THE DISPLAY DATA CHANNEL (DDC_2B) CONTENT INCLUDING:
(Analog mode)

128 BYTES OF EDID CODE :

	0	1	2	3	4	5	6	7	8	9
0	00	FF	FF	FF	FF	FF	FF	00	41	0C
10	52	08	01	01	01	01	08	11	01	03
20	08	2F	1E	78	2E	93	45	A3	55	4A
30	98	27	15	50	54	BF	EF	00	B3	00
40	A9	40	95	0F	95	00	81	C0	81	40
50	71	4F	81	80	21	39	90	30	62	1A
60	27	40	68	B0	36	00	DA	28	11	00
70	00	1C	00	00	00	FF	00	43	4A	31
80	30	37	30	38	31	32	33	34	35	36
90	00	00	00	FC	00	50	68	69	6C	69
100	70	73	20	32	30	30	56	57	00	00
110	00	FD	00	38	4C	1E	5D	11	70	0A
120	20	32	30	30	57	53	00	19		

(08-09) ID Manufacturer Name = PHL
(10-11) Product ID Code (Non-Alphanumerical) = 0852 - (2130)
(12-15) Last 5 Digits of Serial Number = NOT SPECIFIED
(16) Week of Manufacture = 08
(17) Year of Manufacture = 2007
(10-17) Complete Serial Number = NOT SPECIFIED
(18) EDID Structure Version Number = 1
(19) EDID Structure Revision Number = 3
(20) VIDEO INPUT DEFINITION : = Separate Sync, Analog signal, 0.700V/0.300V (1.000 Vp-p)

(21) Maximum Horizontal Image Size = 470mm
(22) Maximum Vertical Image Size = 300mm
(23) Display Gamma = 2.20
(24) DPMS Supported Feature: = Active Off. Display type = RGB color display

(25-34) CHROMA INFO:
Red x = 0.639 Green x = 0.289
Blue x = 0.153 White x = 0.313
Red y = 0.333 Green y = 0.597
Blue y = 0.082 White y = 0.329

(35) ESTABLISHED TIMING I:
720 x 400 @ 70Hz (VGA, IBM)
640 x 480 @ 60Hz (VESA)
640 x 480 @ 67Hz (MAC II, Apple)
640 x 480 @ 72Hz (VESA)
640 x 480 @ 75Hz (VESA)
800 x 600 @ 56Hz (VESA)
800 x 600 @ 60Hz (VESA)

(36) ESTABLISHED TIMING II:
800 x 600 @ 72Hz (VESA)
800 x 600 @ 75Hz (VESA)
832 x 624 @ 75Hz (MAC II, Apple)
1024 x 768 @ 60Hz (VESA)
1024 x 768 @ 70Hz (VESA)
1024 x 768 @ 75Hz (VESA)
1280 x 1024 @ 75Hz (VESA)

(37) Manufacturer's Reserved Timing:
None specified.

(38-53) Standard Timing Identification:
#1: 1680 x 1050 @ 60Hz
#2: 1600 x 1200 @ 60Hz
#3: 1440 x 900 @ 75Hz
#4: 1440 x 900 @ 60Hz
#5: 1280 x 720 @ 60Hz
#6: 1280 x 960 @ 60Hz
#7: 1152 x 864 @ 75Hz
#8: 1280 x 1024 @ 60Hz

(54-71) Detail Timing Description #1:
1680x1050 Pixel Clock=146.2MHz

Horizontal Image Size=474mm
Vertical Image Size=296mm
Refresh Mode:
Non-Interlaced Normal display, no stereo

HORIZONTAL:
Active Time = 1680 pixels
Blanking Time = 560 pixels
Sync Offset = 104 pixels
Sync Pulse Width = 176 pixels
Border = 0 pixels
Frequency = 65.3 kHz

VERTICAL:
Active Time = 1050 lines
Blanking Time = 39 lines
Sync Offset = 3 lines
Sync Pulse Width = 6 lines
Border = 0 lines
Frequency = 60.0 Hz

Sync configuration: Digital separate, V(+), H(-)

(72-89) Monitor Description:

Monitor S/N: CJ10708123456

(90-107) Monitor Description:

Monitor Name: Philips 200VW

(108-125) Monitor Description:

Monitor Range Limits:
Vertical Frequency (min) = 56Hz
Vertical Frequency (max) = 76Hz
Horizontal Frequency (min) = 30KHz
Horizontal Frequency (max) = 93KHz
Maximum Supported Pixel Clock = 170MHz

(127) Checksum OK.

Safety instruction, warnings and notes

index of this chapter:
1 Safety Instructions
2 Warnings
3 Notes

1 Safety Instructions

Safety regulations require that during a repair:
a. Connect the set to the AC Power via an isolation transformer (> 800 VA).
b. Replace safety components, indicated by the symbol ⚠, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

a. Route the wire trees correctly and fix them with the mounted cable clamps.
b. Check the insulation of the AC Power lead for external damage.
c. Check the strain relief of the AC Power cord for proper function.
d. Check the electrical DC resistance between the AC Power plug and the secondary side (only for sets which have a AC Power isolated power supply):
 * Unplug the AC Power cord and connect a wire between the two pins of the AC Power plug.
 * Set the AC Power switch to the "on" position (keep the AC Power cord unplugged!).
 * Measure the resistance value between the pins of the AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
 * Switch "off" the set, and remove the wire between the two Pins of the AC Power plug.
e. Check the cabinet for defects, to avoid touching of any inner parts by the customer.

2 Warnings

a. All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ⚠). Careless handling during repair can reduce life drastically. Make sure that, during repair,
you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.
b. Be careful during measurements in the high voltage section.
c. Never replace modules or other components while the unit is switched "on".
d. When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

3 Notes

3.1 General

Measure the voltages and waveforms with regard to the chassis ground or hot ground, depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative.

The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on

3.2 Schematic Notes

All resistor values are in ohms and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 Kohm).

Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).

All capacitor values are given in micro-farads ($X10^{-6}$), nano-farads (n= $X10^{-9}$), or pico-farads (p= $X10^{-12}$).

Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).

An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.

The correct component values are listed in the Electrical Replacement Parts List. Therefore, always check this list when there is any doubt.

3.3 Lead Free Solder

Philips CE is going to produce lead-free sets (PBF) from 1.1.2005 onwards.
Lead-free sets will be indicated by the PHILIPS-lead-free logo on the Printed Wiring Boards (PWB):

Figure 2-1 Lead-free logo

This sign normally has a diameter of 6 mm, but if there is less space on a board also 3 mm is possible.

In case of doubt wether the board is lead-free or not (or with mixed technologies), you can use the following method:
 * Always use the highest temperature to solder, when using SAC305 (see also instructions below).
 * De-solder thoroughly (clean solder joints to avoid mix of two alloys).

Caution: For BGA-ICs, you must use the correct temperature profile, which is coupled to the 12NC. For an overview of these profiles, visit the website *http://www.atyourservice.ce.philips.com/*
You will find this and more technical information within the "Magazine", chapter "Workshop information".
For additional questions please contact your local repair desk.

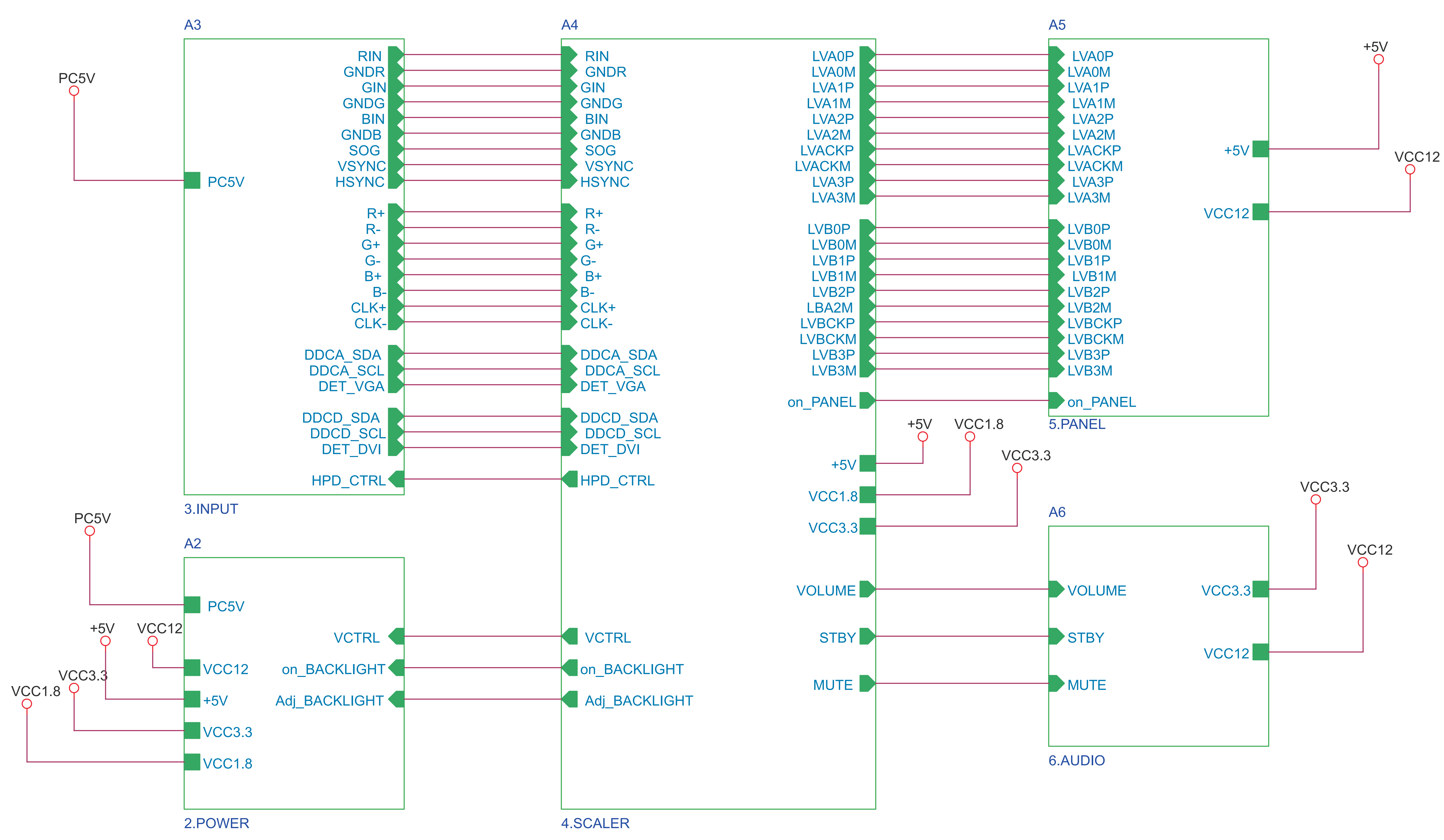
Due to lead-free technology some rules have to be respected by the workshop during a repair:

Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment.
In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.

Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able
 - To reach at least a solder-tip temperature of 400 degree C.
 - To stabilise the adjusted temperature at the solder-tip.
 - To exchange solder-tips for different applications.

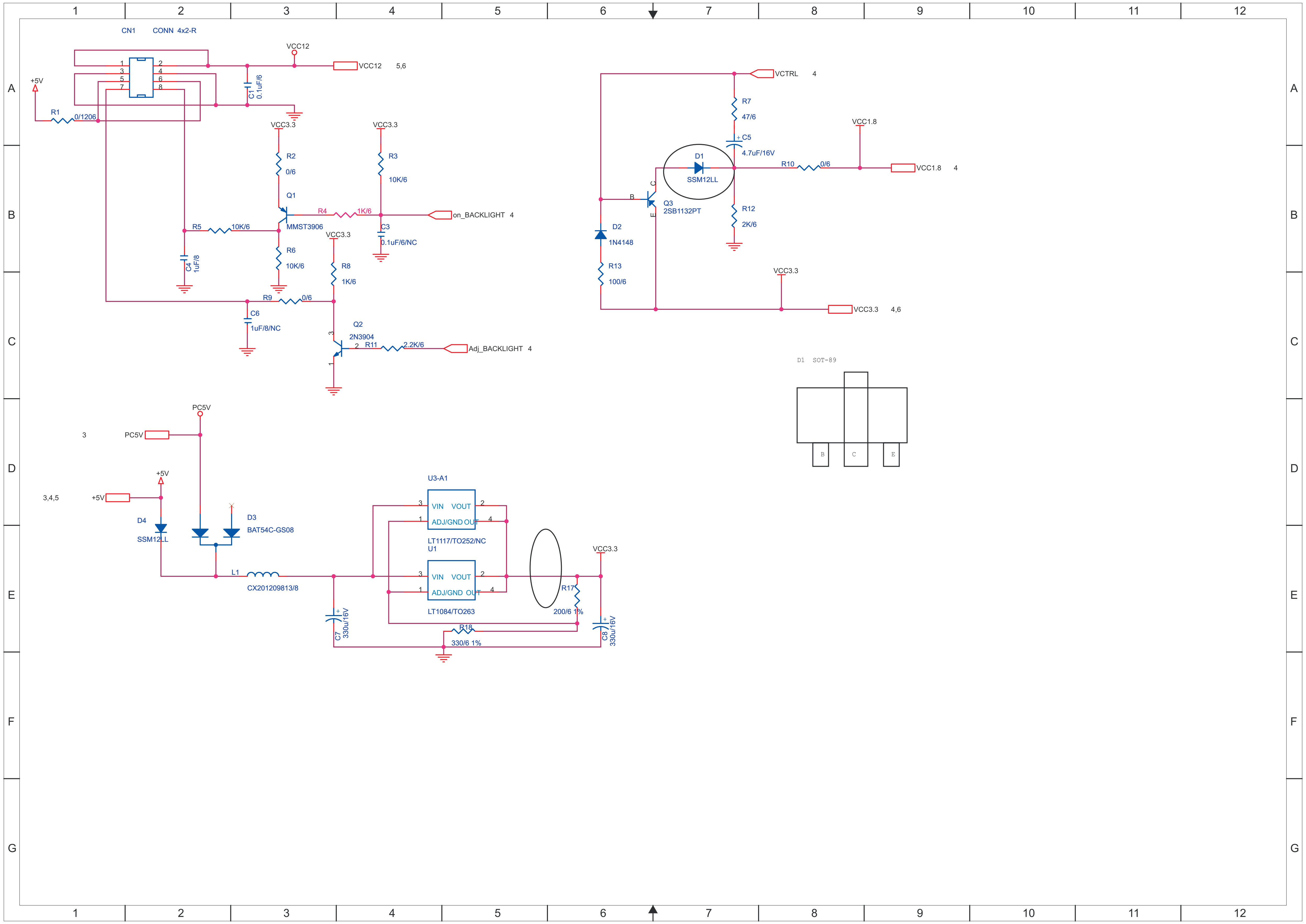
Block Diagram

200VW8 LCD 22



Schematic Diagram(Scaler Board - Power)

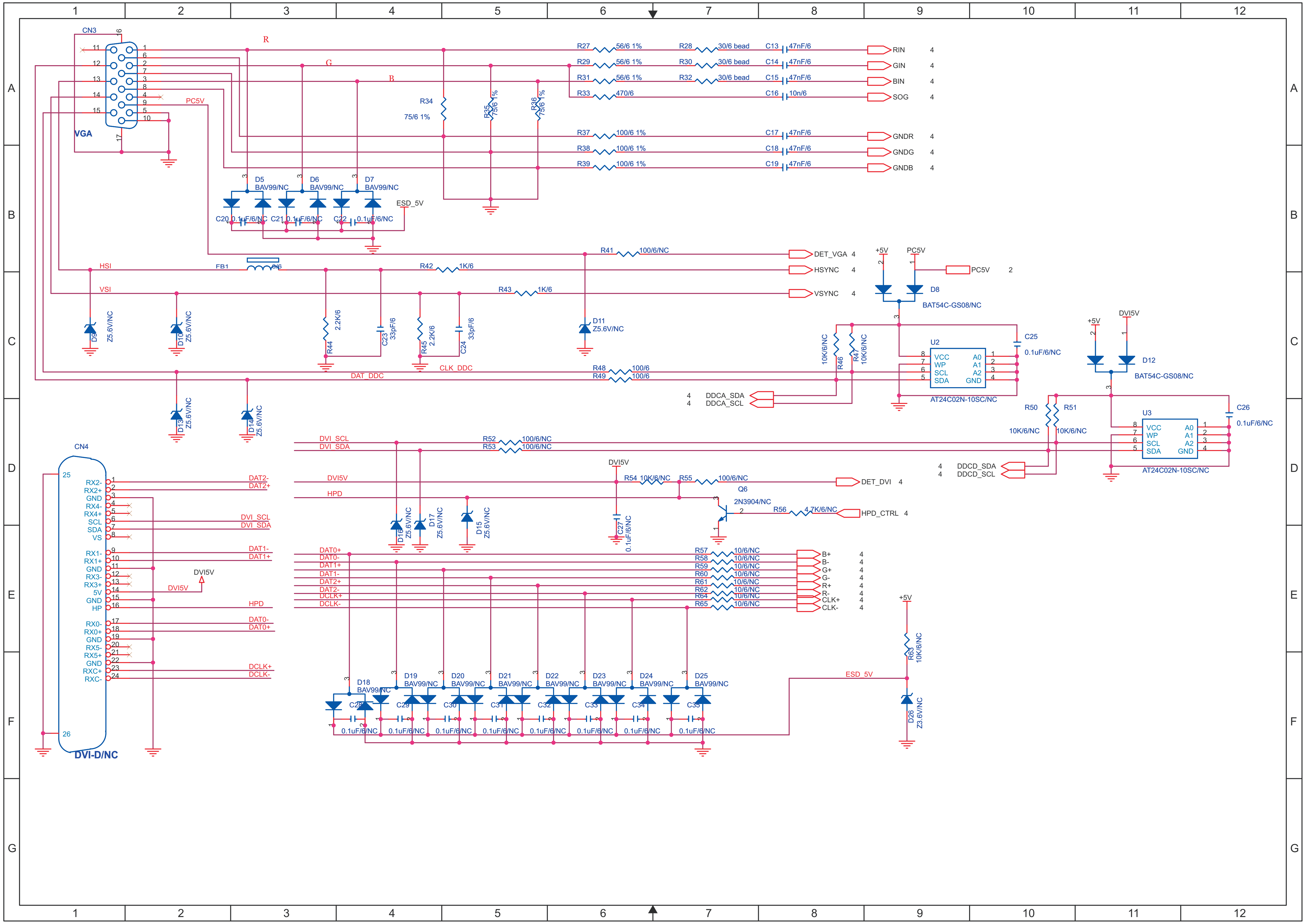
200VW8 LCD 23



S-A2

CN1	A2
C1	A3
C3	B4
C4	B2
C5	A7
C6	C3
C7	E3
C8	E6
D1	B7
D2	B6
D3	D2
D4	D2
L1	E3
Q1	B3
Q2	C3
Q3	B6
R1	A1
R2	B3
R3	B4
R4	B3
R5	B2
R6	B3
R7	A7
R8	B3
R9	C3
R10	B8
R11	C4
R12	B7
R13	B6
R17	E6
R18	E4
U1	E4
U3-A1	D4

Schematic Diagram(Scaler Board - Input)



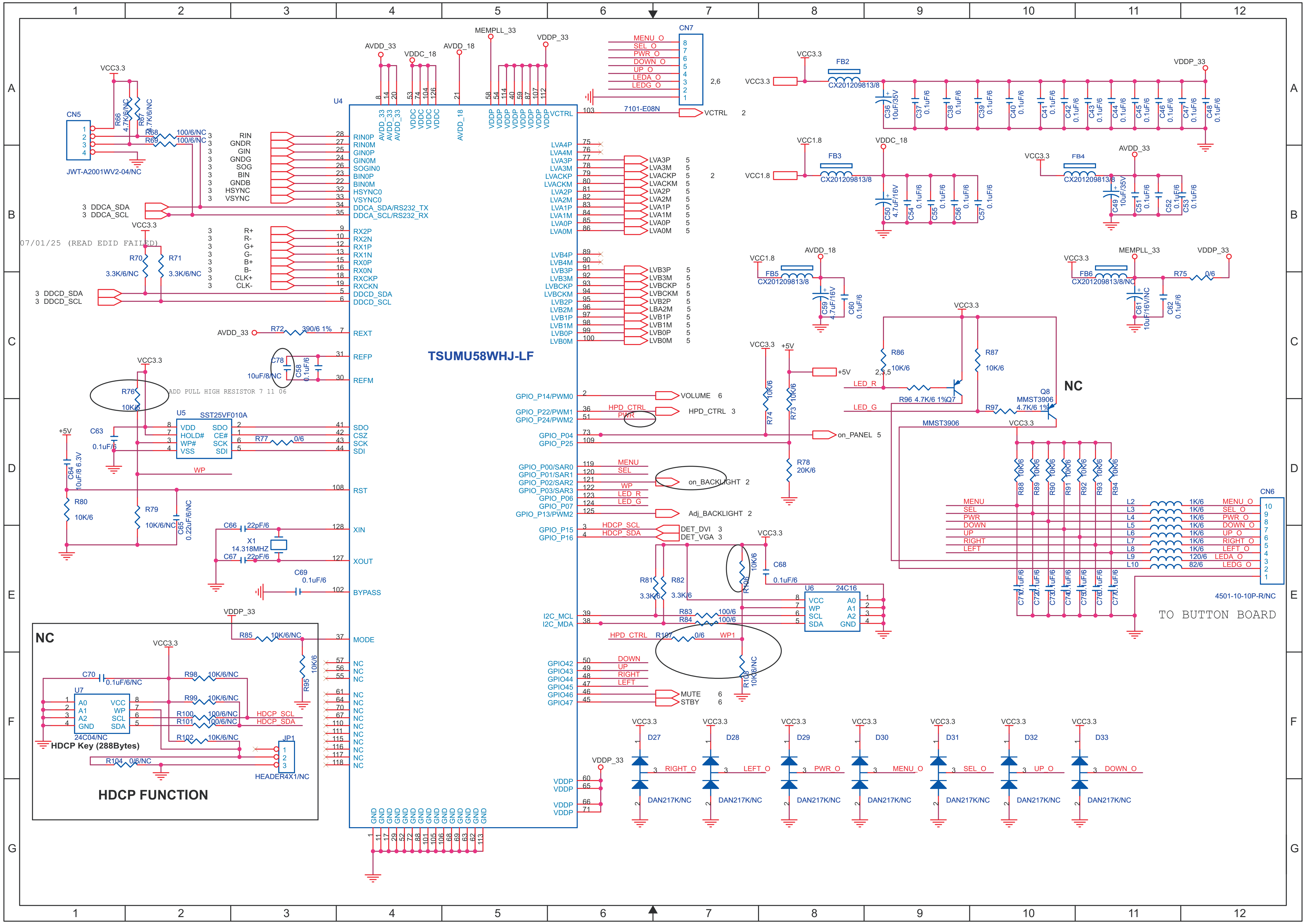
S-A3

C13	A8	D26	F9
C14	A8	FB1	B3
C15	A8	Q6	D7
C16	A8	R27	A6
C16	D8	R28	A7
C17	A8	R29	A6
C18	A8	R30	A7
C19	B8	R31	A6
C20	B3	R32	A7
C21	B3	R33	A6
C22	B4	R34	A4
C23	C4	R35	A5
C24	C4	R36	A5
C25	C10	R37	A6
C26	C12	R38	A6
C27	D6	R39	B6
C28	F4	R41	B6
C29	F4	R42	B4
C30	F4	R43	B5
C31	F5	R43	C5
C32	F5	R44	C3
C33	F6	R45	C4
C34	F6	R46	C8
C35	F7	R47	C8
CN3	A1	R48	C6
CN4	D1	R49	C6
D5	B2	R50	C10
D6	B3	R51	C10
D7	B3	R52	B5
D8	B8	R52	D5
D9	C1	R53	B5
D10	C2	R53	D5
D11	C6	R54	D6
D12	C10	R55	D7
D13	C2	R56	D8
D14	C3	R57	E7
D15	D5	R58	E7
D16	D4	R59	E7
D17	D4	R60	E7
D18	F3	R61	E7
D19	F4	R62	E7
D20	F4	R63	E9
D21	F5	R64	E7
D22	F5	R65	E7
D23	F6	U2	C9
D24	F6	U3	D11
D25	F6		

Schematic Diagram(Scaler Board - Scaler)

200VW8 LCD 25

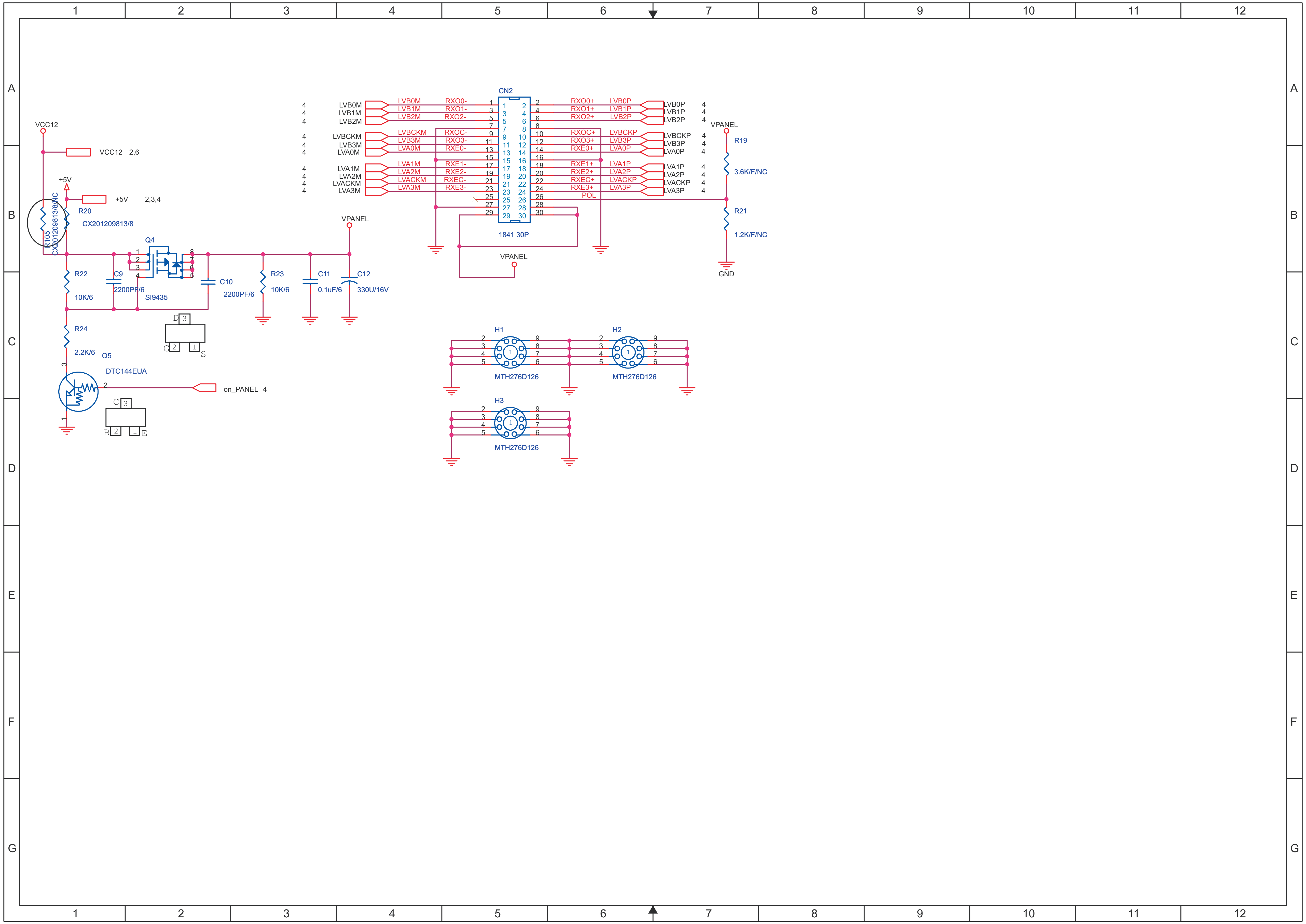
S-A4



CN5	A1	L2	D11
CN6	D12	L3	D11
CN7	A7	L4	D11
C36	A8	L5	D11
C36	D8	L6	D11
C37	A9	L7	D11
C38	A9	L8	E11
C39	A9	L9	E11
C40	A10	L10	E11
C41	A10	Q7	C9
C42	A10	Q8	C10
C43	A10	R66	A1
C44	A11	R67	A2
C45	A11	R68	A2
C46	A11	R69	A2
C47	A11	R70	B2
C48	A11	R71	B2
C49	B11	R72	C3
C50	B8	R73	C8
C51	B11	R74	C7
C52	B11	R75	B11
C53	B11	R76	C2
C54	B9	R77	D3
C55	B9	R78	D8
C56	B9	R79	D2
C57	B9	R80	D1
C58	C3	R81	E6
C59	C8	R82	E6
C60	C8	R83	E7
C61	C11	R84	E7
C62	C11	R85	E3
C63	D1	R86	C8
C64	D1	R87	C9
C65	D2	R88	D10
C66	D3	R89	D10
C67	E3	R90	D10
C68	E7	R91	D11
C69	E3	R92	D11
C70	E1	R93	D11
C71	E10	R94	D11
C72	E10	R95	F3
C73	E10	R96	C9
C74	E10	R97	D10
C75	E10	R98	F2
C76	E10	R99	F2
C77	E11	R100	F2
C78	C3	R101	F2
D27	F6	R102	F2
D28	F7	R104	F1
D29	F8	R106	E7
D30	F8	R107	E7
D31	F9	R108	F7
D32	F10	U4	A3
D33	F10	U5	D2
FB2	A8	U6	E6
FB3	B8	U7	F1
FB4	B10	X1	E3
FB5	B8		
FB6	B10		
JP1	F3		

Schematic Diagram(Scaler Board - Panel)

200VW8 LCD 26

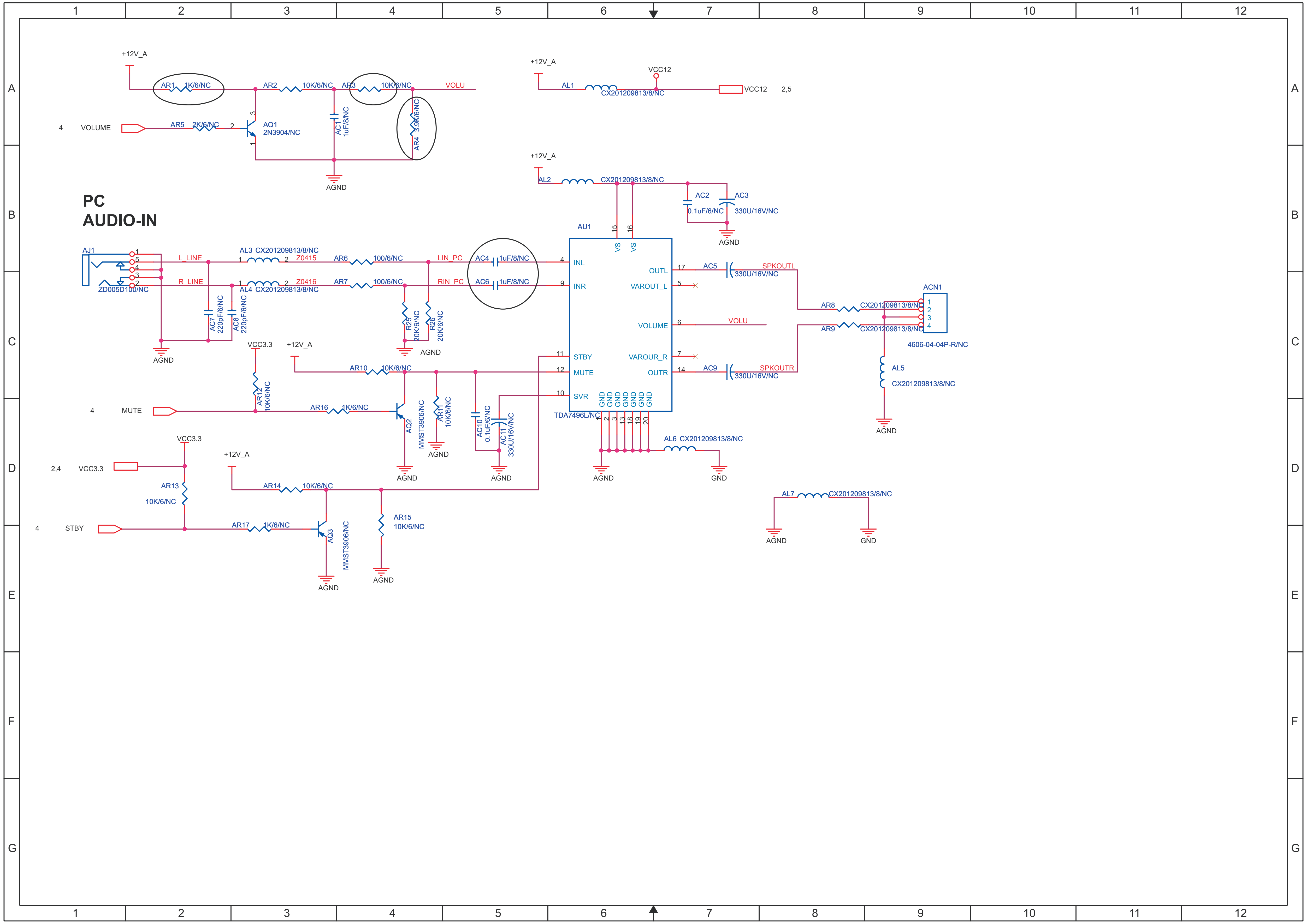


S-A5

CN2	A5
C9	B1
C10	B2
C11	B3
C12	B3
H1	B5
H1	C5
H2	C6
H3	B5
H3	C5
Q4	B2
Q5	C1
R19	B7
R20	B1
R21	B7
R22	B1
R23	B3
R24	C1
R105	B1

Schematic Diagram(Scaler Board - Audio)

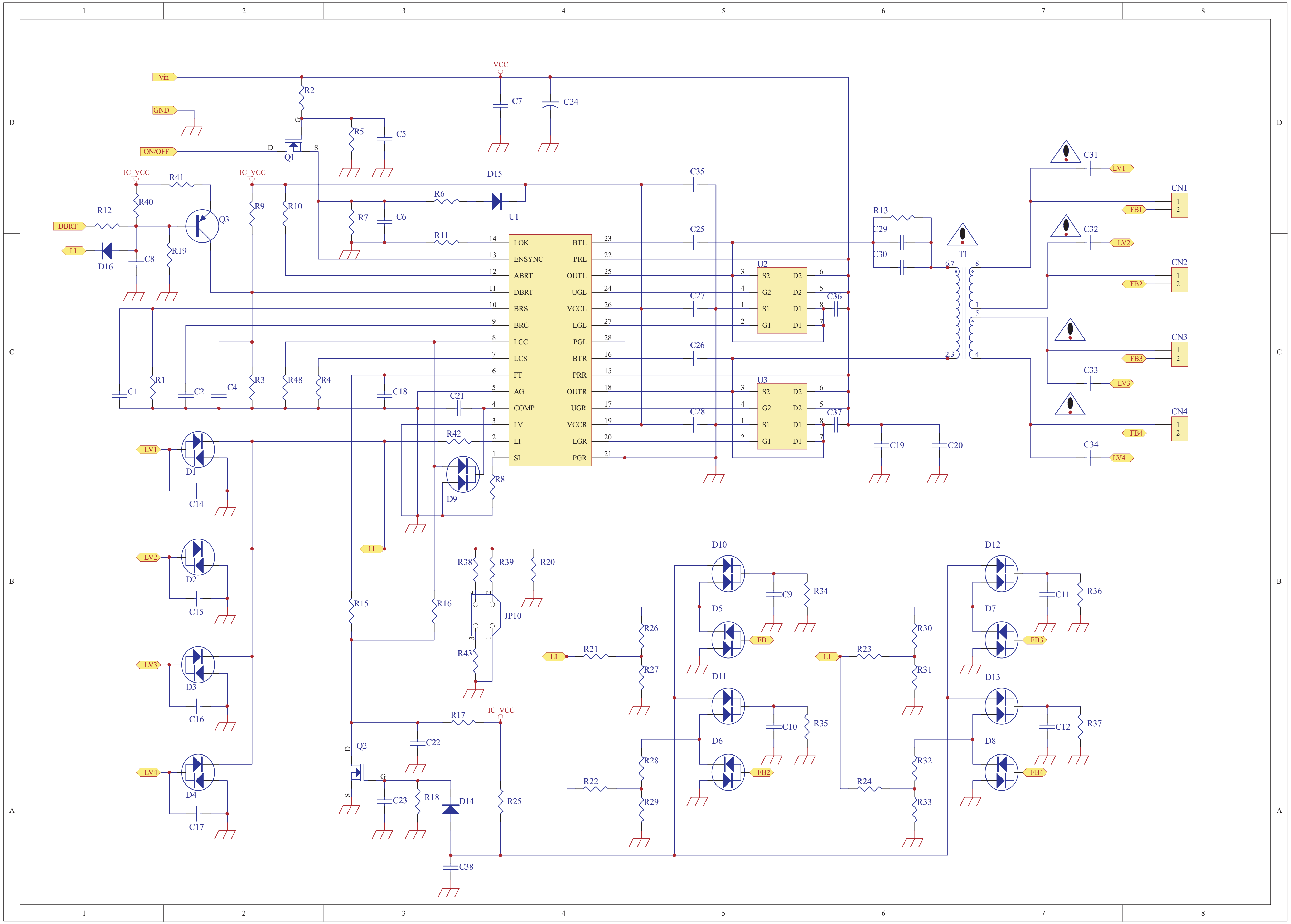
200VW8 LCD 27



S-A6

ACN1	C9
AC1	A3
AC2	B7
AC3	B7
AC4	B5
AC5	B7
AC6	B5
AC7	C2
AC8	C2
AC9	C7
AC10	B5
AC10	C5
AC11	B5
AC11	D5
AJ1	B1
AL1	A6
AL2	B6
AL3	B3
AL4	B3
AL5	C8
AL6	D6
AL7	D8
AQ1	A3
AQ2	C4
AQ3	D3
AR1	A2
AR2	A3
AR3	A4
AR4	A4
AR5	A2
AR6	B4
AR7	B4
AR8	C8
AR9	C8
AR10	C4
AR11	C4
AR12	C3
AR13	D2
AR14	D3
AR15	D4
AR16	C3
AR17	D3
AU1	B6
R25	C4
R26	C4

Schematic Diagram(Power Board)



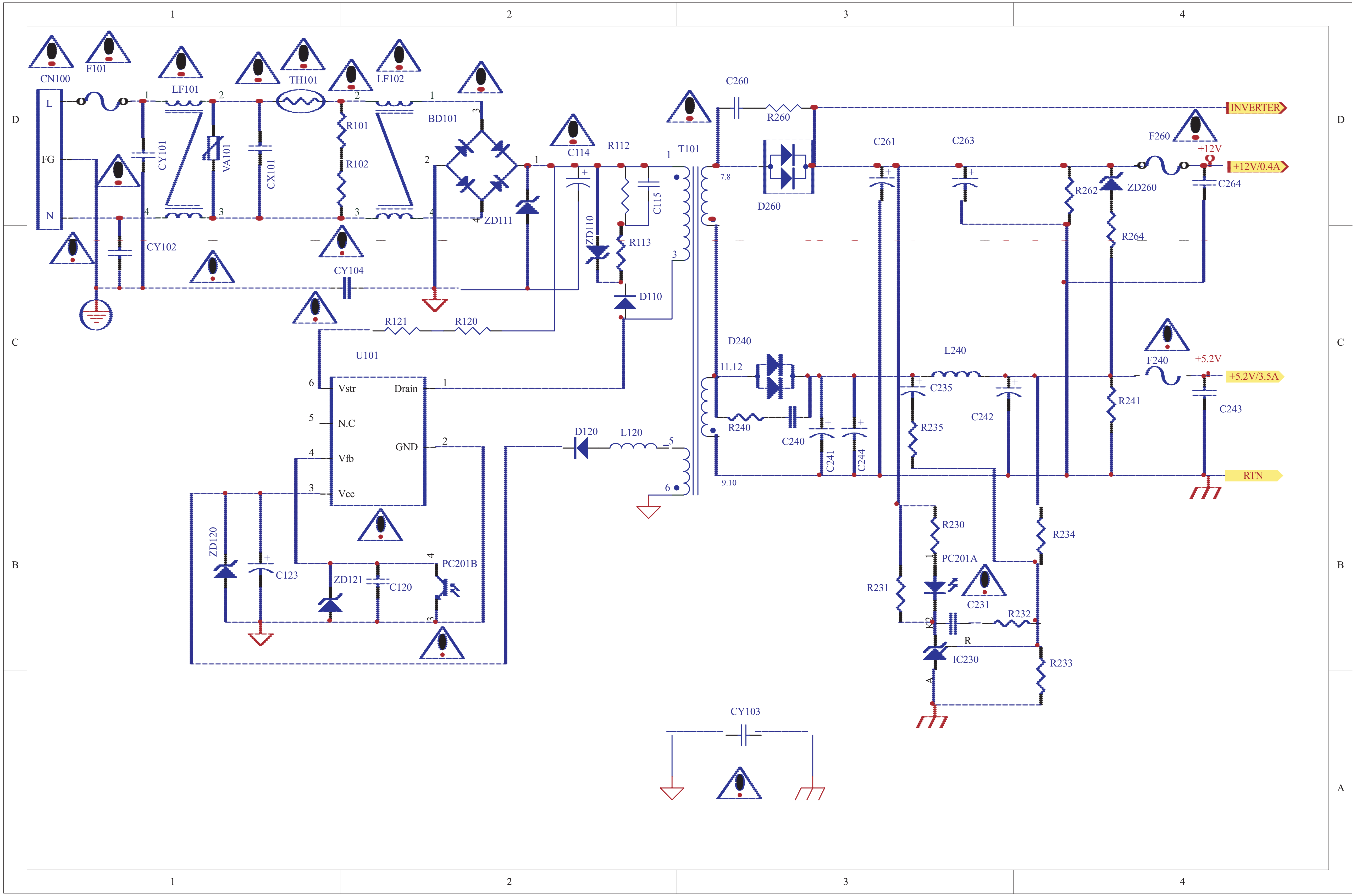
P-A

C1	C1	FB4	C8
C2	C2	JP10	B4
C4	C2	L1	C1
C5	D3	L1	B3
C6	D3	L1	B4
C7	D4	LV1	C1
C8	C1	LV1	D8
C9	B5	LV2	B1
C10	A5	LV2	C8
C11	B7	LV3	B1
C12	A7	LV3	C8
C14	B2	LV4	A1
C15	B2	LV4	C8
C16	A2	Q1	D2
C17	A2	Q3	D2
C18	C3	Q3	A3
C19	C6	R1	C1
C20	C6	R2	D2
C21	C3	R3	C2
C22	A3	R4	C2
C23	A3	R4	C3
C24	D4	R5	D3
C25	D5	R6	D3
C26	C5	R7	D3
C27	C5	R8	B4
C28	C5	R9	D2
C29	D6	R10	D2
C30	C6	R11	C3
C31	D7	R12	D1
C32	D7	R13	D6
C33	C7	R15	B3
C34	C7	R16	B3
C35	D5	R17	A3
C36	C6	R18	A3
C37	C6	R19	C2
C38	A3	R20	B4
CN1	D8	R21	B4
CN2	C8	R22	A4
CN3	C8	R23	B6
CN4	C8	R24	A6
D1	B2	R25	A4
D2	B2	R26	B5
D3	B2	R27	B5
D4	A2	R28	A5
D5	B5	R29	A5
D6	A5	R30	B6
D7	B7	R31	B6
D8	A7	R32	A6
D9	B3	R33	A6
D10	B5	R34	B6
D11	B5	R35	A6
D12	B7	R36	B7
D13	B7	R37	A7
D14	A3	R38	B3
D15	D4	R39	B4
D16	C1	R40	D1
FB1	B5	R41	D2
FB1	D8	R42	C3
FB2	A5	R43	B3
FB2	C8	R48	C2
FB3	B7	T1	C7
FB3	C8	U1	D4
FB4	A7	U2	C5
		U3	C5

Schematic Diagram(Power Board)

200VW8 LCD 29

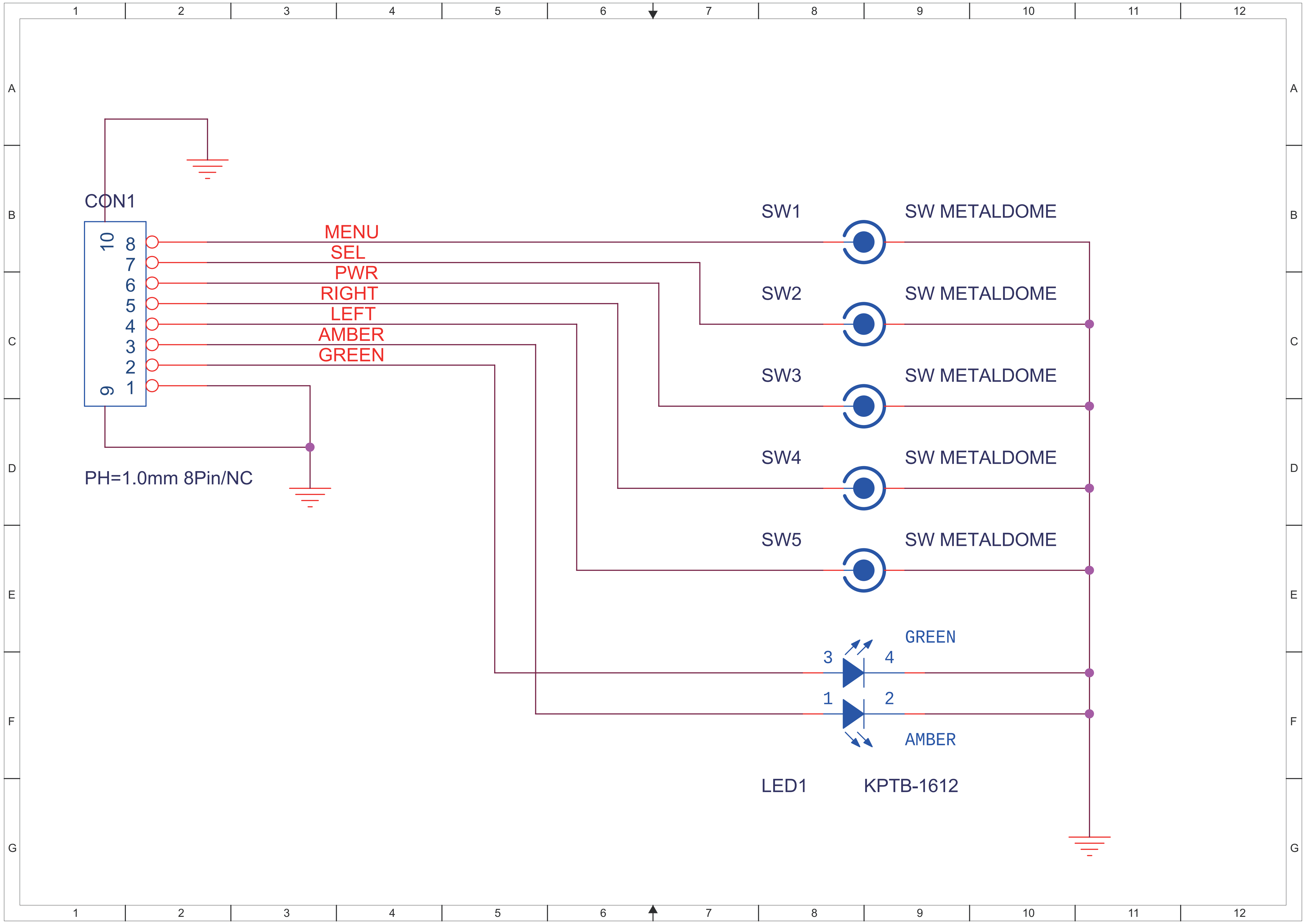
P-B



BD101	D2
C114	D2
C115	D2
C120	B2
C123	B1
C231	B3
C235	C3
C240	C3
C241	B3
C242	C3
C243	C4
C244	B3
C260	D3
C261	D3
C263	D3
C264	D4
CN100	D1
CX101	D1
CY101	D1
CY102	C1
CY102	D1
CY103	A3
CY104	C2
D110	C2
D120	C2
D240	C3
D260	D3
F101	D1
F240	C4
F260	D4
IC230	B3
K2	B3
L120	C2
L240	C3
LF101	D1
LF102	D2
PC201A	B3
PC201B	B2
R101	D2
R102	D2
R112	D2
R113	C2
R120	C2
R121	C2
R230	B3
R231	B3
R232	B4
R233	B4
R234	B4
R235	C3
R240	C3
R241	C4
R260	D3
R262	D4
R264	C4
T101	D3
TH101	D1
U101	C2
VA101	D1
ZD110	C2
ZD111	D2
ZD120	B1
ZD121	B2
ZD260	D4

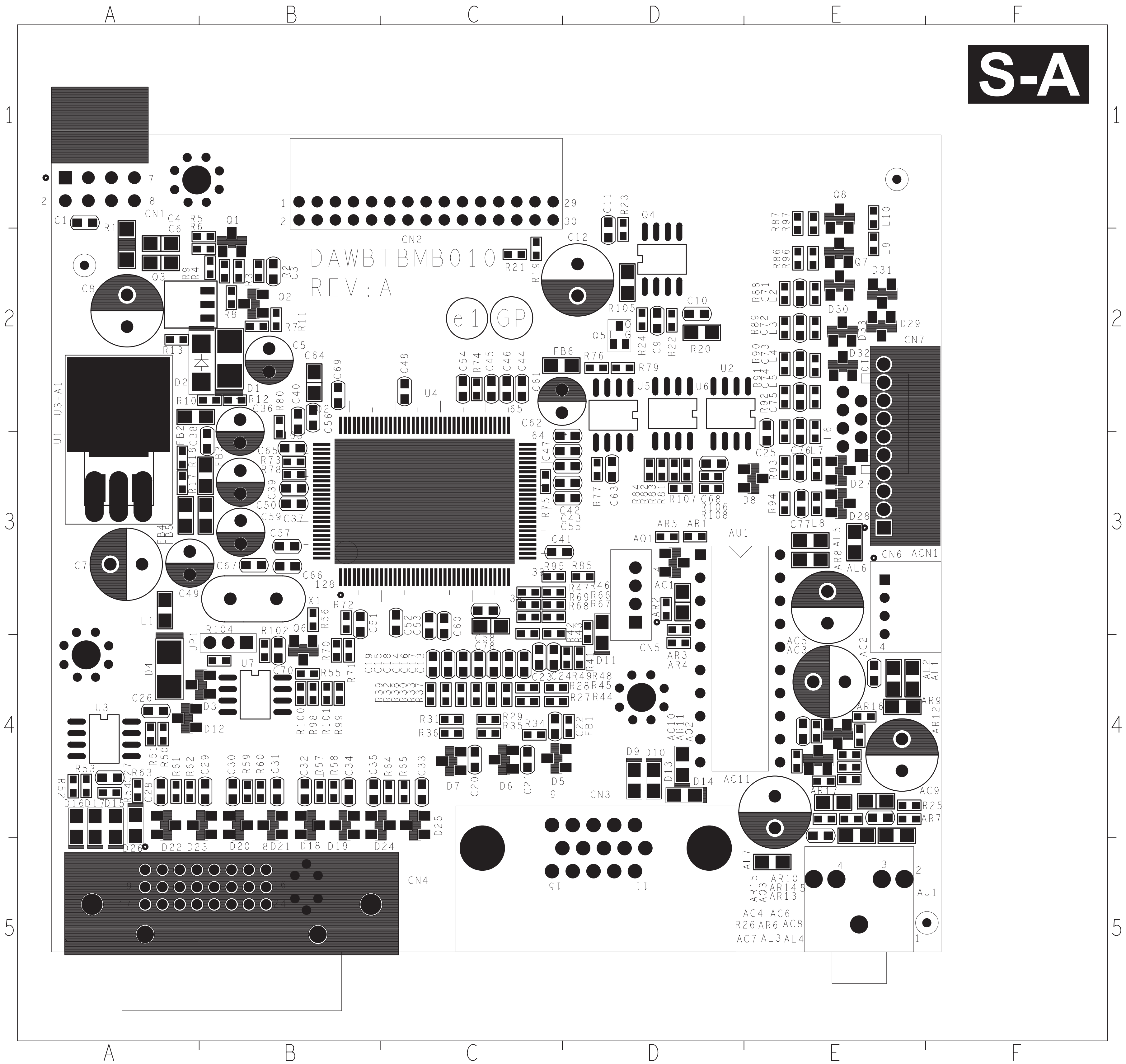
Schematic Diagram(Buttom Board)

B-1



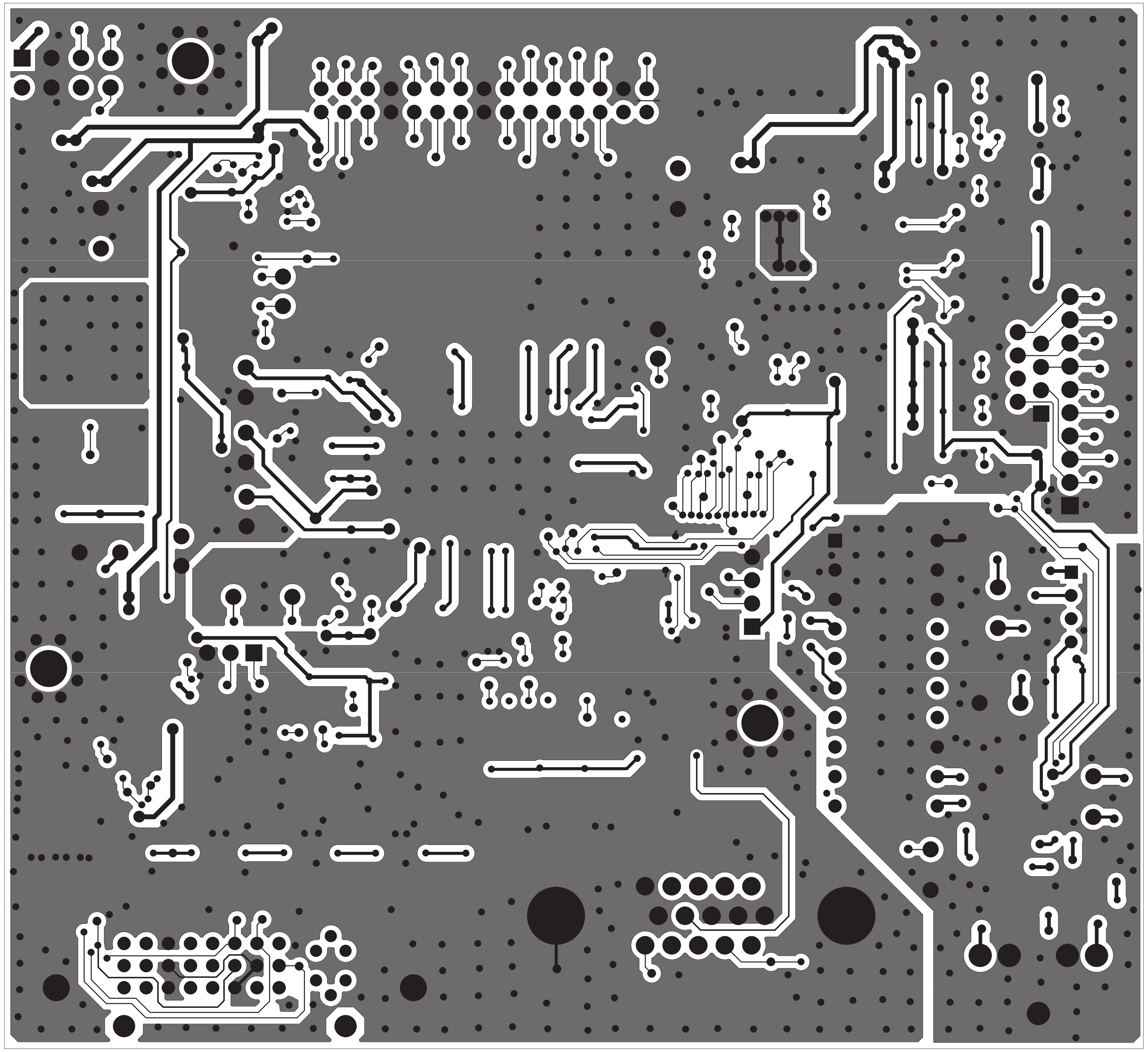
CON1	B1
LED1	G8
SW5	E8
SW4	D8
SW3	C8
SW2	C8
SW1	B8

Layout Side View(Scaler Board)



AC1	D3	C11	D1	C61	D2	D26	A4	R18	A2	R69	C2
AC2	E3	C12	D1	C62	D2	D27	E2	R19	C1	R70	B3
AC3	E4	C13	C2	C63	D2	D28	E3	R20	D2	R71	B3
AC4	E4	C14	C2	C64	B2	D29	E2	R21	C1	R72	B3
AC5	E3	C15	C2	C65	B2	D30	E1	R22	D2	R73	B2
AC6	E4	C16	C2	C66	B3	D31	E1	R23	D1	R74	C2
AC7	E4	C17	C2	C67	B3	D32	E2	R24	D2	R75	C2
AC8	E4	C18	C2	C68	D2	D33	E2	R25	E4	R76	D2
AC9	E4	C19	C2	C69	B2	FB1	D4	R26	E4	R77	D2
AC10	E4	C20	C4	C70	B3	FB2	A2	R27	C4	R78	B2
AC11	E4	C21	C4	C71	E1	FB3	B2	R28	C4	R79	D2
ACN1	E3	C22	C4	C72	E2	FB4	A3	R29	C4	R80	B2
AJ1	E5	C23	C2	C73	E2	FB5	B3	R30	C4	R81	D2
AL1	E4	C24	C2	C74	E2	FB6	C2	R31	C4	R82	D2
AL2	E4	C25	E2	C75	E2	H1	D4	R32	C4	R83	D2
AL3	E4	C26	A4	C76	E2	H2	A1	R33	C4	R84	D2
AL4	E4	C27	A4	C77	E3	H3	A3	R34	C4	R85	D3
AL5	E3	C28	A4	C78	C2	JP1	B3	R35	C4	R86	E1
AL6	E3	C29	B4	CN1	A1	L1	A3	R36	C4	R87	E1
AL7	E5	C30	B4	CN2	C1	L2	E1	R37	C4	R88	E1
AQ1	D3	C31	B4	CN3	D4	L3	E2	R38	C4	R89	E2
AQ2	E4	C32	B4	CN4	B5	L4	E2	R39	C4	R90	E2
AQ3	E4	C33	C4	CN5	D3	L5	E2	R41	D3	R91	E2
AR1	D3	C34	B4	CN6	E2	L6	E2	R42	C2	R92	E2
AR2	D3	C35	B4	CN7	E2	L7	E2	R43	C2	R93	E2
AR3	D3	C36	B2	D1	B2	L8	E3	R44	C4	R94	E3
AR4	D3	C37	B3	D2	B2	L9	E1	R45	C4	R95	C2
AR5	D3	C38	B2	D3	B4	L10	E1	R46	C2	R96	E1
AR6	E4	C39	B2	D4	A3	Q1	B1	R47	C2	R97	E1
AR7	E4	C40	B2	D5	C4	Q2	B1	R48	D3	R98	B4
AR8	E3	C41	C2	D6	C4	Q3	A1	R49	D3	R99	B4
AR9	E4	C42	D2	D7	C4	Q4	D1	R50	A4	R100	B4
AR10	E4	C43	D2	D8	E2	Q5	D2	R51	A4	R101	B4
AR11	E4	C44	C2	D9	D4	Q6	B3	R52	A4	R102	B3
AR12	E4	C45	C2	D10	D4	Q7	E1	R53	A4	R104	B3
AR13	E4	C46	C2	D11	D3	Q8	E1	R54	A4	R105	D1
AR14	E4	C47	D2	D12	A4	R1	A1	R55	B3	R106	D2
AR15	E4	C48	C2	D13	D4	R2	B1	R56	B3	R107	D2
AR16	E4	C49	A3	D14	D4	R3	B1	R57	B4	R108	D2
AR17	E4	C50	B2	D15	A4	R4	B1	R58	B4	U1	A2
AU1	D3	C51	B3	D16	A4	R5	B1	R59	B4	U2	D2
C1	A1	C52	C2	D17	A4	R6	B1	R60	B4	U3	A4
C3	B1	C53	C2	D18	B4	R7	B2	R61	A4	U3-A1	A2
C4	A1	C54	C2	D19	B4	R8	B1	R62	A4	U4	C2
C5	B2	C55	D3	D20	B4	R9	B1	R63	A4	U5	D2
C6	A1	C56	B2	D21	B4	R10	B2	R64	C4	U6	D2
C7	A3	C57	B3	D22	A4	R11	B2	R65	C4	U7	B4
C8	A1	C58	C2	D23	B4	R12	B2	R66	C2	X1	B3
C9	D2	C59	B3	D24	C4	R13	A2	R67	C2		
C10	D1	C60	C2	D25	C4	R17	A2	R68	C2		

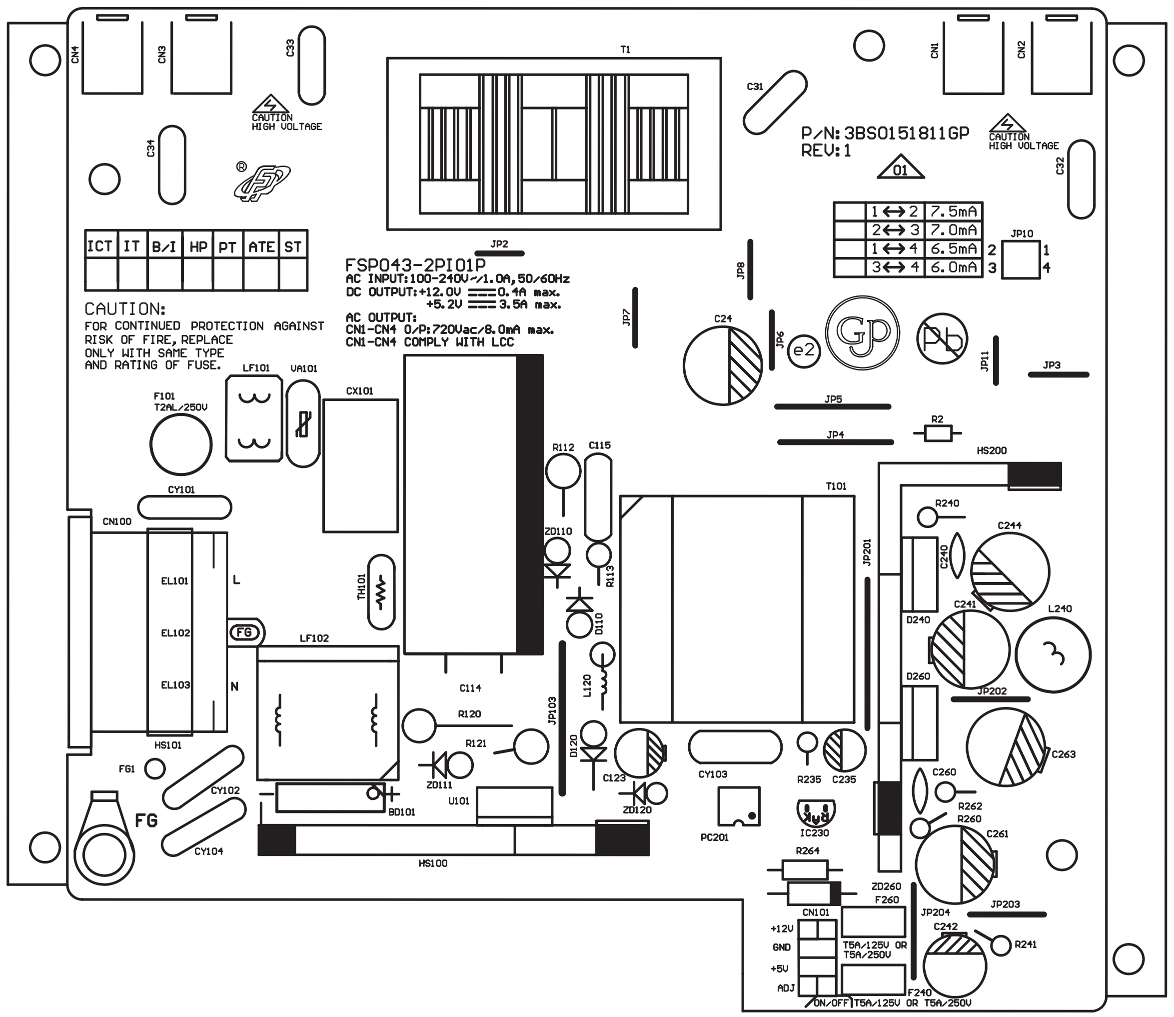
Layout Side View(Scaler Board)



S-B

Layout Side View(Power Board)

P-A



A5 CY101
B5 U101
B5 BD101
B5 HS100
C5 ZD120
C5 PC201
D5 IC230
D5 R240
D5 CN101
D5 ZD260
D5 F260
D5 F240
D5 R262
D5 R260
D5 C261
D5 JP204
D5 JP203
D5 C242
D5 R241

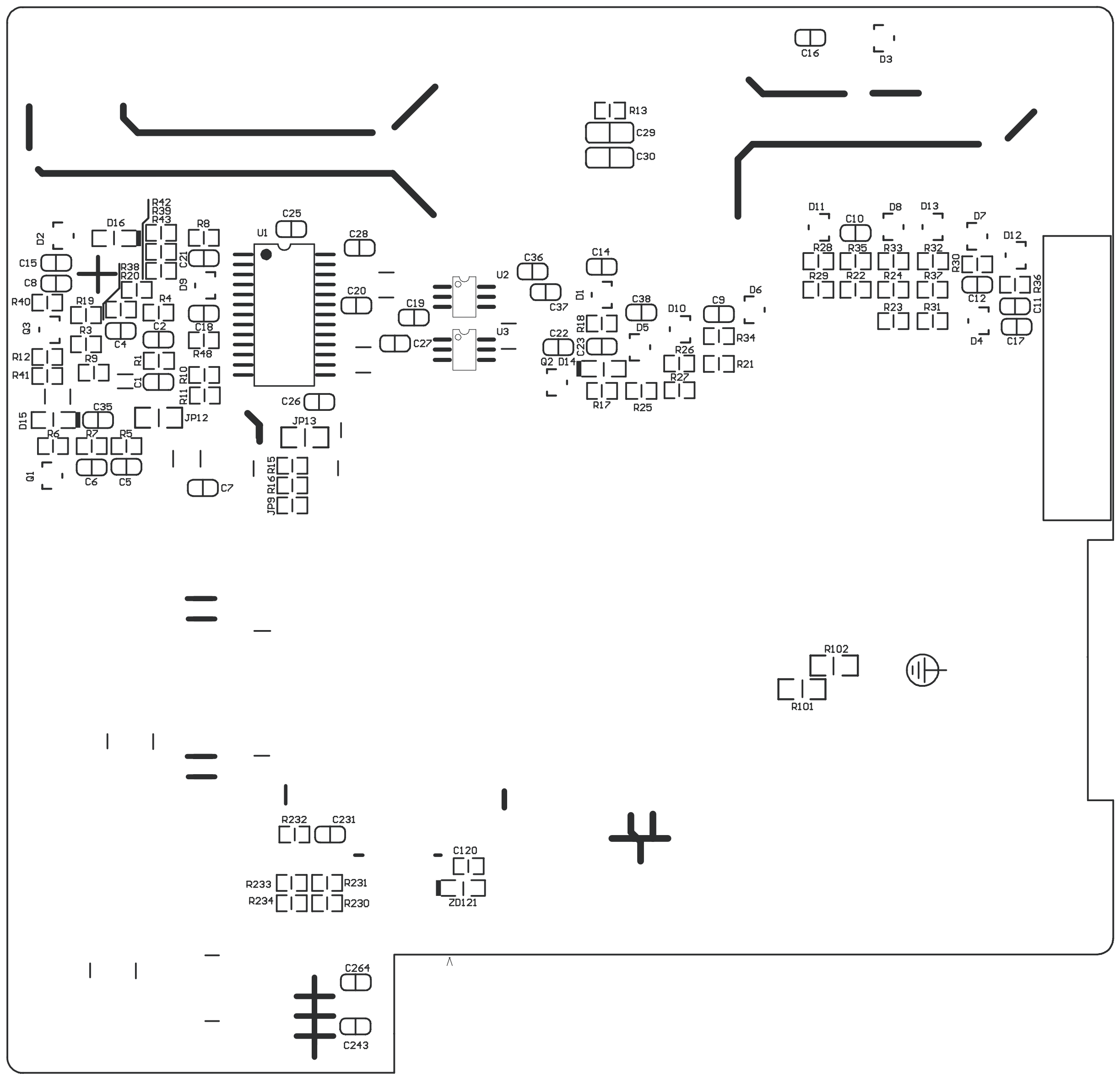
A4 CY101
A4 CN100
A4 EL101
A4 EL102
A4 EL103
A4 HS101
A4 FG01
A4 CY102
B4 LF102
B4 TH101
B4 C114
B4 R120
B4 R121
B4 ZD111
C4 ZD110
C4 JP103
C4 D120
C4 L120
C4 D110
C4 R113
C4 C123
C4 CY103
C4 R235
D4 C235
D4 T101
D4 JP201
D4 R240
D4 C240
D4 C244
D4 D240
D4 C241
D4 C240
D4 D260
D4 JP202
D4 C235
D4 C260
D4 C263

A3 F101
B3 LF101
B3 VA101
B3 CX101
B3 JP2
C3 R112
C3 C115
C3 JP7
C3 JP6
C3 JP8
C3 C24
D3 JP5
D3 JP4
D3 T101
D3 R2
D3 JP11
D3 HS200
D3 JP3
D3 JP10
D3 C32

A2 CN4
A2 CN3
A2 C34
B2 C33
C2 T1
C2 C31
D2 CN1
D2 CN2

Layout Side View(Power Board)

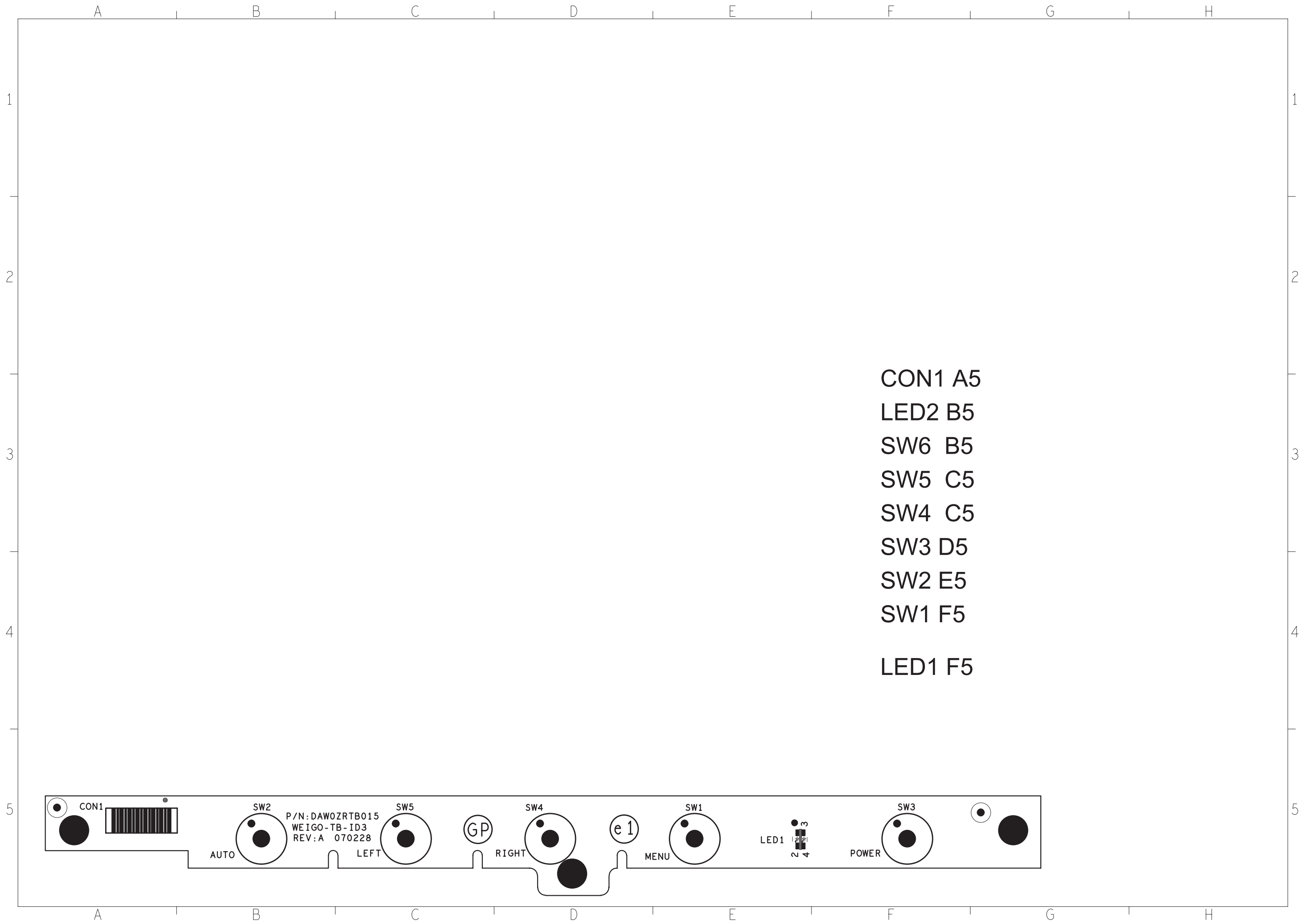
P-B



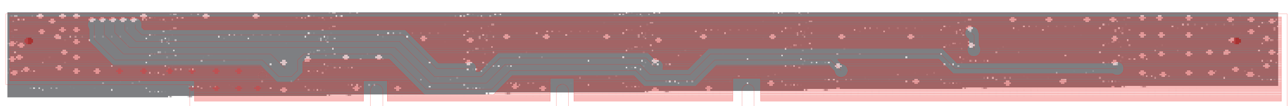
B5 C243	A2 D2	C2 U2	D2 C9
B4 R232	A2 C15	C2 U3	D2 D6
B4 R233	A2 C8	C2 C36	D2 R34
B4 R234	A2 R40	C2 C37	D2 R21
B4 R231	A2 Q3	C2 C22	D2 D11
B4 R230	A2 R12	C2 Q2	D2 R28
B4 C264	A2 R41	C2 D14	D2 R29
B4 C231	A2 R19	C2 D14	D2 C10
C4 C120	A2 R3	C2 R18	D2 R35
D4 R101	A2 R9	C2 C23	D2 R22
A3 D15	A2 D16	C2 C14	D2 D8
A3 Q1	A2 R38	C2 R13	D2 R33
A3 C35	A2 R20	C2 C29	D2 R24
A3 R5	A2 C4	C2 C30	D2 R23
A3 R6	A2 R1	C2 C38	D2 D13
A3 R7	A2 C1	C2 D5	D2 R32
A3 C5	B2 R42	C2 D10	D2 R37
A3 C6	B2 R39	C2 R26	D2 R31
B3 R11	B2 R43	C2 R27	D2 R30
B3 JP12	B2 R4		E2 D7
B3 C7	B2 C2		E2 C12
B3 C26	B2 C21		E2 D4
B3 JP13	B2 D9		E2 D12
B3 JP9	B2 R8		E2 C17
B3 R16	B2 C18		E2 R36
B3 R15	B2 R48		E2 C11
C3 R17	B2 R10		D1 C16
C3 R25	B2 U1		D1 D3
D3 R101	B2 C25		
	B2 C28		
	B2 C20		
	B2 C19		
	B2 C27		

Layout Side View(Buttom Board)

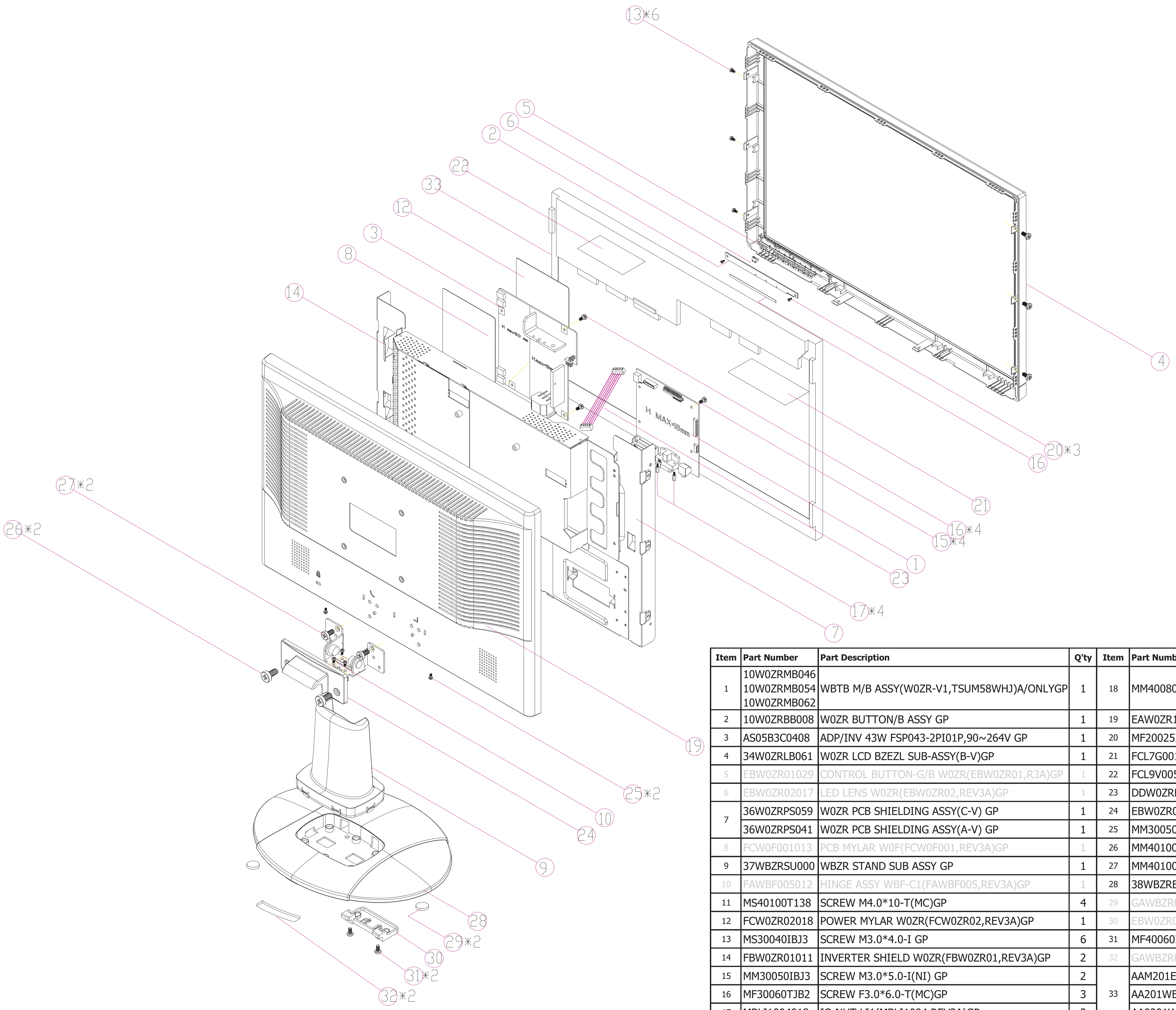
B-A



B-B



Exploded view



Item	Part Number	Part Description	Q'ty	Item	Part Number	Part Description	Q'ty
1	10W0ZRMB046 10W0ZRMB054 10W0ZRMB062	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP	1	18	MM40080BBW1	SCREW M4.0*8.0-B(NI,WASHER)GP	1
2	10W0ZRBB008	W0ZR BUTTON/B ASSY GP	1	19	EAW0ZR11015	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP	1
3	AS05B3C0408	ADP/INV 43W FSP043-2PI01P,90~264V GP	1	20	MF20025IBJ8	SCREW F2*2.5-I(NI) GP	3
4	34W0ZRLB061	W0ZR LCD BZEZL SUB-ASSY(B-V)GP	1	21	FCL7G001016	AL FOIL L7G(FCL7G001,REV3A)HAN GP	1
5	EBW0ZR01029	CONTROL BUTTON-G/B W0ZR(EBW0ZR01,R3A)GP	1	22	FCL9V005015	AL FOIL L9VDQ-4(FCL9V005,R3A)100*80 GP	1
6	EBW0ZR02017	LED LENS W0ZR(EBW0ZR02,REV3A)GP	1	23	DDW0ZRPB008	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP	1
7	36W0ZRPS059	W0ZR PCB SHIELDING ASSY(C-V) GP	1	24	EBW0ZR05016	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP	1
	36W0ZRPS041	W0ZR PCB SHIELDING ASSY(A-V) GP	1	25	MM30050FJ26	SCREW M3.0*5-F(BNI) GP	2
8	FCW0F001013	PCB MYLAR W0F(FCW0F001,REV3A)GP	1	26	MM40100B244	SCREW M4.0*10-B BLACK (NYLOK)GP	2
9	37WBZRSU000	WBZR STAND SUB ASSY GP	1	27	MM40100FCI8	SCREW M4.0*10,F(NI,NYLOK) GP	2
10	FAWBF005012	HINGE ASSY WBF-C1(FAWBF005,REV3A)GP	1	28	38WBZRBS009	WBZR BASE SUB ASSY GP	1
11	MS40100T138	SCREW M4.0*10-T(MC)GP	4	29	GAWBZR02011	RUBBER WBZR(GAWBZR02,REV3A)GP	2
12	FCW0ZR02018	POWER MYLAR W0ZR(FCW0ZR02,REV3A)GP	1	30	EBW0ZR03013	BASE-LOCK W0ZR(EBW0ZR03,REV3A)GP	1
13	MS30040IBJ3	SCREW M3.0*4.0-I GP	6	31	MF40060IBJ2	SCREW F4.0*6-I(NI)GP	2
14	FBW0ZR01011	INVERTER SHIELD W0ZR(FBW0ZR01,REV3A)GP	2	32	GAWBZR01015	RUBBER FOOT WBZR(GAWBZR01,REV3A) GP	2
15	MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP	2	33	AAM201EW147	LCD 20" M201EW02 V8(WSXGA 1680X1050) GP FOR AUO PANEL	1
16	MF30060TJB2	SCREW F3.0*6.0-T(MC)GP	3		AA201WE3209	LCD(TFT) 20" LM201WE3-TLH2 (WSXGA) GP FOR LPL PANEL	1
17	MBLI1004018	IO NUT LI1(MBLI1004,REV3A)GP	2		AA0201WA203	LCD(TFT)20" CLAA201WA04-000(WSXGA) GP FOR CPT PANEL	1

Remark: Part number which marked gray color are sub-part.

RSPL FOR 200VW8FB/00(W0ZR-V1C)
1 P/N: 1W0ZRVPL065(CPT PANEL)

Part Name		Philips P/N	Techview P/N	Description	Q'ty	Location	Remark
Electronic Components:	LCD panel	996510007641	AA0201WA203	LCD(TFT)20" CLAA201WA04-000(WSXGA) GP	1	Item 33 in exploded view	CPT PANEL
	MB-LCD cable	996500044098	DD0L9ELC013	CABLE MB-LCD(30P,150MM)L9E-A1 GP	1		
	MB-LCD cable	996500044099	DD0L9ELC030	CABLE LVDS(30P,150MM,LINKTEC AU)L9EA1 GP	1		2nd source
	Button-MB cable		DEFC5629008	CABLE FFC MB-BB(8P/8P,562MM) GP	1		
	Power-MB cable		DDW0ZRPB008	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP	1	Item 23 in exploded view	
	IC	996510005354	AJU58WH^C09	IC(128P) TSUMU58WHJ-LF (165MHZ,PQFP) GP	1	U4	Main IC, programme excutive
	IC	996500044124	AKE10800R01	IC EEPROM(8P) BR24L16F-WE2(2K*8,SOP8)GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500044127	AKE258C0K04	IC(8P)FROM SST25VF010A-33-4C-SAE SOIC8GP	1	U5	Store programme
	IC	996500044128	AKE25WC0P06	IC(8P)FLASH PM25LV010-33SCE(SOIC) GP	1	U5	Store programme
	IC	996500044125	AKE3A8S0Y10	IC EEPROM(8P)24LC16BT-I(2K*8,100KHZ) GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500045091	AL001084021	IC(3P) AIC1084PE(TO-252) GP	1	U1	Power translation, other IC power supply.
	IC	996510008929	AL001084048	IC(3P) ME1084DTA (TO-252) GP	1	U1	Power translation, other IC power supply.
	TRANSISTOR	996500044113	BA001132Z05	TR,SMD 2SB1132PT(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044114	BA001132Z13	TR,SMD 2SB1132T100R(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044115	BA001440ZB8	TR CHDTC144EUPT(50V,30MA)SOT-323 GP	1	Q5	
	TRANSISTOR	996500044111	BA039040Z19	TR SMD PMBS3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044112	BA039040Z27	TR SMD SST3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044110	BA039060Z10	TR,SMD PMBS3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996510002084	BA039060Z28	TRANSISTOR,SMD SST3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996500044116	BA144EUAZ04	TRANSISTOR SMD DTC144EUA(50V,30MA) GP	1	Q5	
	TRANSISTOR	996500044117	BAM09435006	TR MOSFET ME9435A(-30V,-5.3A)SOIC8 GP	1	Q4	
Mechanical Components:	Stand	996500044100	37WBZRSU000	WBZR STAND SUB ASSY GP	1	Item 9 in exploded view	
	Base	996500044102	38WBZRBS009	WBZR BASE SUB ASSY GP	4	Item 28 in exploded view	
	Hinge cover	996500044101	EBW0ZR05016	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP	1	Item 24 in exploded view	
	VGA&D-SUB to shielding		MBLI1004018	IO NUT LI1(MBLI1004,REV3A)GP	2	Item 17 in exploded view	
	PCBAs to metal shielding		MF30060TJB2	SCREW F3.0*6.0-T(MC)GP	3	Item 16 in exploded view	
	Panel to L/R bracket		MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP	2	Item 15 in exploded view	
PCBA:	Power board	996500044131	AS05B3C0408	ADP/INV 43W FSP043-2PI01P,90~264V GP	1	Item 3 in exploded view	
	Main board	996510008732	10W0ZRMB046	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP	1	Item 1 in exploded view	21WBTBMB117
	Bios		AZW0ZRBC025	W0ZR-V1C SW BIOS IMAGE(TSUMU58WHJ)CPT	1		
	Button board	996510007644	10W0ZRBB008	W0ZR BUTTON/B ASSY GP	1	Item 2 in exploded view	23W0ZRBB001
Cabinets:	Front bezel assembly	996510005352	34W0ZRLB061	W0ZR LCD BZEZL SUB-ASSY(B-V)GP	1	Item 4 in exploded view	
	Back cover assembly	996510008736	EAW0ZR11015	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP	1	Item 19 in exploded view	
Accessories:	VGA cable	996510002083	DDL7ZIPC002	CABLE MB-VGA(15/15P,1.8M)BLACK L7ZI GP	1		
	Power cord	996500044109	DM333181801	PWR CORD B 1.8M SP-023/16A CT-12 EUR GP	1		
	Manual		HGW0ZR05011	CD+QSG W0ZR-V1C (HGW0ZR05,R3A)WW_GP	1		
	LCD film		JXW0ZB01019	LCD FILM W0ZB-A1(JXW0ZB01,REV3A)GP	1		
Packing Material:	EPE bag		HAW0ZR01010	EPE BAG W0ZR(HAW0ZR01,R3A)GP	1		
	Carton	996510009176	HFW0ZR30014	CARTON W0ZR-V1C (HFW0ZR30,R3A)WW_GP	1		
	Cushion	996520000249	HBW0ZR01011	END CAP-L W0ZR(HBW0ZR01,REV3A)GP	1		
	Cushion	996520000247	HBW0ZR02017	END CAP-R W0ZR(HBW0ZR02,REV3A)GP	1		

Recommended Spare Part List

RSPL FOR 200VW8FB/00(W0ZR-V1)
1 P/N: 1W0ZRVPL073(AUO & LPL PANEL)

Part Name		Philips P/N	Techview P/N	Description	Q'ty	Location	Remark
Electronic Components:	LCD panel	996510005350	AAM201EW147	LCD 20" M201EW02 V8(WSXGA 1680X1050) GP	1	Item 33 in exploded view	AUO PANEL
	LCD panel	996510009231	AA201WE3209	LCD(TFT) 20" LM201WE3-TLH2 (WSXGA) GP	1	Item 33 in exploded view	LPL PANEL(2nd source)
	MB-LCD cable	996500044098	DD0L9ELC013	CABLE MB-LCD(30P,150MM)L9E-A1 GP	1		
	MB-LCD cable	996500044099	DD0L9ELC030	CABLE LVDS(30P,150MM,LINKTEC AU)L9EA1 GP	1		2nd source
	Button-MB cable		DEFC5629008	CABLE FFC MB-BB(8P/8P,562MM) GP	1		
	Power-MB cable		DDW0ZRPB008	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP	1	Item 23 in exploded view	
	IC	996510005354	AJU58WH^C09	IC(128P) TSUMU58WHJ-LF (165MHZ,PQFP) GP	1	U4	Main IC, programme excutive
	IC	996500044124	AKE10800R01	IC EEPROM(8P) BR24L16F-WE2(2K*8,SOP8)GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500044127	AKE258C0K04	IC(8P)FROM SST25VF010A-33-4C-SAE SOIC8GP	1	U5	Store programme
	IC	996500044128	AKE25WC0P06	IC(8P)FLASH PM25LV010-33SCE(SOIC) GP	1	U5	Store programme
	IC	996500044125	AKE3A8S0Y10	IC EEPROM(8P)24LC16BT-I(2K*8,100KHZ) GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500045091	AL001084021	IC(3P) AIC1084PE(TO-252) GP	1	U1	Power translation, other IC power supply.
	IC	996510008929	AL001084048	IC(3P) ME1084DTA (TO-252) GP	1	U1	
	TRANSISTOR	996500044113	BA001132Z05	TR,SMD 2SB1132PT(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044114	BA001132Z13	TR,SMD 2SB1132T100R(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044115	BA001440ZB8	TR CHDTC144EUPT(50V,30MA)SOT-323 GP	1	Q5	
	TRANSISTOR	996500044111	BA039040Z19	TR SMD PMBS3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044112	BA039040Z27	TR SMD SST3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044110	BA039060Z10	TR,SMD PMBS3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996510002084	BA039060Z28	TRANSISTOR,SMD SST3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996500044116	BA144EUAZ04	TRANSISTOR SMD DTC144EUA(50V,30MA) GP	1	Q5	
	TRANSISTOR	996500044117	BAM09435006	TR MOSFET ME9435A(-30V,-5.3A)SOIC8 GP	1	Q4	
Mechanical Components:	Stand	996500044100	37WBZRSU000	WBZR STAND SUB ASSY GP	1	Item 9 in exploded view	
	Base	996500044102	38WBZRBS009	WBZR BASE SUB ASSY GP	4	Item 28 in exploded view	
	Hinge cover	996500044101	EBW0ZR05016	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP	1	Item 24 in exploded view	
	VGA&D-SUB to shielding		MBLI1004018	IO NUT LI1(MBLI1004,REV3A)GP	2	Item 17 in exploded view	
	PCBAs to metal shielding		MF30060TJB2	SCREW F3.0*6.0-T(MC)GP	3	Item 16 in exploded view	
	Panel to L/R bracket		MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP	6	Item 15 in exploded view	
PCBA:	Power board	996500044131	AS05B3C0408	ADP/INV 43W FSP043-2PI01P,90~264V GP	1	Item 3 in exploded view	
	Main board	996510009177 996510009232	10W0ZRMB054 10W0ZRMB062	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP	1	Item 1 in exploded view	21WBTBMB117
	Bios		AZW0ZRBA022	W0ZR-V1 SW BIOS IMAGE(TSUMU58WHJ)AUO	1		
	Bios		AZW0ZRBL037	W0ZR-V1 SW BIOS IMAGE(TSUMU58WHJ)LPL	1		
	Button board	996510007644	10W0ZRBB008	W0ZR BUTTON/B ASSY GP	1	Item 2 in exploded view	23W0ZRBB001
Cabinets:	Front bezel assembly	996510005352	34W0ZRLB061	W0ZR LCD BZEZL SUB-ASSY(B-V)GP	1	Item 4 in exploded view	
	Back cover assembly	996510008736	EAW0ZR11015	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP	1	Item 19 in exploded view	
Accessories:	VGA cable	996510002083	DDL7ZIPC002	CABLE MB-VGA(15/15P,1.8M)BLACK L7ZI GP	1		
	Power cord	996500044109	DM333181801	PWR CORD B 1.8M SP-023/16A CT-12 EUR GP	1		
	Manual		HGW0ZR05011	CD+QSG W0ZR-V1C (HGW0ZR05,R3A)WW_GP	1		
	LCD film		JXW0ZB01019	LCD FILM W0ZB-A1(JXW0ZB01,REV3A)GP	1		
Packing Material:	EPE bag		HAW0ZR01010	EPE BAG W0ZR(HAW0ZR01,R3A)GP	1		
	Carton	996510009176	HFW0ZR30014	CARTON W0ZR-V1C (HFW0ZR30,R3A)WW_GP	1		
	Cushion	996520000249	HBW0ZR01011	END CAP-L W0ZR(HBW0ZR01,REV3A)GP	1		
	Cushion	996520000247	HBW0ZR02017	END CAP-R W0ZR(HBW0ZR02,REV3A)GP	1		

RSPL FOR 200VW8FB/93(W0ZR-V1)
1 P/N: 1W0ZRVPL081(AUO & LPL PANEL)

Part Name		Philips P/N	Techview P/N	Description	Q'ty	Location	Remark
Electronic Components:	LCD panel	996510009231	AA201WE3209	LCD(TFT) 20" LM201WE3-TLH2 (WSXGA) GP	1	Item 33 in exploded view	LPL PANEL
	LCD panel	996510005350	AAM201EW147	LCD 20" M201EW02 V8(WSXGA 1680X1050) GP	1		AUO PANEL(2nd source)
	MB-LCD cable	996500044098	DD0L9ELC013	CABLE MB-LCD(30P,150MM)L9E-A1 GP	1		
	MB-LCD cable	996500044099	DD0L9ELC030	CABLE LVDS(30P,150MM,LINKTEC AU)L9EA1 GP	1		2nd source
	Button-MB cable		DEFC5629008	CABLE FFC MB-BB(8P/8P,562MM) GP	1		
	Power-MB cable		DDW0ZRPB008	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP	1	Item 23 in exploded view	
	IC	996510005354	AJU58WH^C09	IC(128P) TSUMU58WHJ-LF (165MHZ,PQFP) GP	1	U4	Main IC, programme excutive
	IC	996500044124	AKE10800R01	IC EEPROM(8P) BR24L16F-WE2(2K*8,SOP8)GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500044127	AKE258C0K04	IC(8P)FROM SST25VF010A-33-4C-SAE SOIC8GP	1	U5	Store programme
	IC	996500044128	AKE25WC0P06	IC(8P)FLASH PM25LV010-33SCE(SOIC) GP	1	U5	Store programme
	IC	996500044125	AKE3A8S0Y10	IC EEPROM(8P)24LC16BT-I(2K*8,100KHZ) GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500045091	AL001084021	IC(3P) AIC1084PE(TO-252) GP	1	U1	Power translation, other IC power supply.
	IC	996510008929	AL001084048	IC(3P) ME1084DTA (TO-252) GP	1	U1	Power translation, other IC power supply.
	TRANSISTOR	996500044113	BA001132Z05	TR,SMD 2SB1132PT(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044114	BA001132Z13	TR,SMD 2SB1132T100R(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044115	BA001440ZB8	TR CHDTC144EUPT(50V,30MA)SOT-323 GP	1	Q5	
	TRANSISTOR	996500044111	BA039040Z19	TR SMD PMBS3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044112	BA039040Z27	TR SMD SST3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044110	BA039060Z10	TR,SMD PMBS3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996510002084	BA039060Z28	TRANSISTOR,SMD SST3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996500044116	BA144EUAZ04	TRANSISTOR SMD DTC144EUA(50V,30MA) GP	1	Q5	
	TRANSISTOR	996500044117	BAM09435006	TR MOSFET ME9435A(-30V,-5.3A)SOIC8 GP	1	Q4	
Mechanical Components:	Stand	996500044100	37WBZRSU000	WBZR STAND SUB ASSY GP	1	Item 9 in exploded view	
	Base	996500044102	38WBZRBS009	WBZR BASE SUB ASSY GP	4	Item 28 in exploded view	
	Hinge cover	996500044101	EBW0ZR05016	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP	1	Item 24 in exploded view	
	VGA&D-SUB to shielding		MBLI1004018	IO NUT LI1(MBLI1004,REV3A)GP	2	Item 17 in exploded view	
	PCBAs to metal shielding		MF30060TJB2	SCREW F3.0*6.0-T(MC)GP	3	Item 16 in exploded view	
	Panel to L/R bracket		MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP	6	Item 15 in exploded view	
PCBA:	Power board	996500044131	AS05B3C0408	ADP/INV 43W FSP043-2PI01P,90~264V GP	1	Item 3 in exploded view	
	Main board	996510009177 996510009232	10W0ZRMB054 10W0ZRMB062	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP	1	Item 1 in exploded view	21WBTBMB117
	Bios		AZW0ZRBA022	W0ZR-V1 SW BIOS IMAGE(TSUMU58WHJ)AUO	1		
	Bios		AZW0ZRBL037	W0ZR-V1 SW BIOS IMAGE(TSUMU58WHJ)LPL	1		
	Button board	996510007644	10W0ZRBB008	W0ZR BUTTON/B ASSY GP	1	Item 2 in exploded view	23W0ZRBB001
Cabinets:	Front bezel assembly	996510008733	34W0ZRLB036	W0ZR BEZZL SUB ASSY(B-V)CN GP	1	Item 4 in exploded view	
	Back cover assembly	996510008736	EAW0ZR11015	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP	1	Item 19 in exploded view	
Accessories:	VGA cable	996510002083	DDL7ZIPC002	CABLE MB-VGA(15/15P,1.8M)BLACK L7ZI GP	1		
	Power cord	996500044139	DM333181S01	POWER CORD B 1.8M SP-506/10A (CHN) GP	1		
	Manual		HGW0ZR05011	CD+QSG W0ZR-V1C (HGW0ZR05,R3A)WW_GP	1		
	LCD film		JXW0ZB01019	LCD FILM W0ZB-A1(JXW0ZB01,REV3A)GP	1		
Packing Material:	EPE bag		HAW0ZR01010	EPE BAG W0ZR(HAW0ZR01,R3A)GP	1		
	Carton	996510008737	HFW0ZR25011	CARTON W0ZR-V1C M(HFW0ZR25,R3A)CN GP	1		
	Cushion-L	996510008738	HBW0ZR03013	CHINA END CAP-L W0ZR(HBW0ZR03,REV3A)GP	1		
	Cushion-R	996510008739	HBW0ZR04010	CHINA END CAP-R W0ZR(HBW0ZR04,REV3A)GP	1		

Recommended Spare Part List

RSPL FOR 200VW8FB/93(W0ZR-V1C)
1 P/N: 1W0ZRVPL090(CPT PANEL)

Part Name		Philips P/N	Techview P/N	Description	Q'ty	Location	Remark
Electronic Components:	LCD panel	996510007641	AA0201WA203	LCD(TFT)20" CLAA201WA04-000(WSXGA) GP	1	Item 33 in exploded view	CPT PANEL
	MB-LCD cable	996500044098	DD0L9ELC013	CABLE MB-LCD(30P,150MM)L9E-A1 GP	1		
	MB-LCD cable	996500044099	DD0L9ELC030	CABLE LVDS(30P,150MM,LINKTEC AU)L9EA1 GP	1		2nd source
	Button-MB cable		DEFC5629008	CABLE FFC MB-BB(8P/8P,562MM) GP	1		
	Power-MB cable		DDW0ZRPB008	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP	1	Item 23 in exploded view	
	IC	996510005354	AJU58WH^C09	IC(128P) TSUMU58WHJ-LF (165MHZ,PQFP) GP	1	U4	Main IC, programme excutive
	IC	996500044124	AKE10800R01	IC EEPROM(8P) BR24L16F-WE2(2K*8,SOP8)GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500044127	AKE258C0K04	IC(8P)FROM SST25VF010A-33-4C-SAE SOIC8GP	1	U5	Store programme
	IC	996500044128	AKE25WC0P06	IC(8P)FLASH PM25LV010-33SCE(SOIC) GP	1	U5	Store programme
	IC	996500044125	AKE3A8S0Y10	IC EEPROM(8P)24LC16BT-I(2K*8,100KHZ) GP	1	U6	Store Timing table ,HDCP KEY information
	IC	996500045091	AL001084021	IC(3P) AIC1084PE(TO-252) GP	1	U1	Power translation, other IC power supply.
	IC	996510008929	AL001084048	IC(3P) ME1084DTA (TO-252) GP	1	U1	Power translation, other IC power supply.
	TRANSISTOR	996500044113	BA001132Z05	TR,SMD 2SB1132PT(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044114	BA001132Z13	TR,SMD 2SB1132T100R(32V,1A) SOT 89 GP	1	Q3	
	TRANSISTOR	996500044115	BA001440ZB8	TR CHDTC144EUPT(50V,30MA)SOT-323 GP	1	Q5	
	TRANSISTOR	996500044111	BA039040Z19	TR SMD PMBS3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044112	BA039040Z27	TR SMD SST3904(40V,200MA) GP	1	Q2	
	TRANSISTOR	996500044110	BA039060Z10	TR,SMD PMBS3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996510002084	BA039060Z28	TRANSISTOR,SMD SST3906(40V,200MA) GP	3	Q1,Q7,Q8	
	TRANSISTOR	996500044116	BA144EUAZ04	TRANSISTOR SMD DTC144EUA(50V,30MA) GP	1	Q5	
	TRANSISTOR	996500044117	BAM09435006	TR MOSFET ME9435A(-30V,-5.3A)SOIC8 GP	1	Q4	
Mechanical Components:	Stand	996500044100	37WBZRSU000	WBZR STAND SUB ASSY GP	1	Item 9 in exploded view	
	Base	996500044102	38WBZRBS009	WBZR BASE SUB ASSY GP	4	Item 28 in exploded view	
	Hinge cover	996500044101	EBW0ZR05016	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP	1	Item 24 in exploded view	
	VGA&D-SUB to shielding		MBLI1004018	IO NUT LI1(MBLI1004,REV3A)GP	2	Item 17 in exploded view	
	PCBAs to metal shielding		MF30060TJB2	SCREW F3.0*6.0-T(MC)GP	3	Item 16 in exploded view	
	Panel to L/R bracket		MM30050IBJ3	SCREW M3.0*5.0-I(NI) GP	6	Item 15 in exploded view	
PCBA:	Power board	996500044131	AS05B3C0408	ADP/INV 43W FSP043-2PI01P,90~264V GP	1	Item 3 in exploded view	
	Main board	996510008732	10W0ZRMB046	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP	1	Item 1 in exploded view	21WBTBMB117
	Bios		AZW0ZRBC025	W0ZR-V1C SW BIOS IMAGE(TSUMU58WHJ)CPT	1		
	Button board	996510007644	10W0ZRBB008	W0ZR BUTTON/B ASSY GP	1	Item 2 in exploded view	23W0ZRBB001
Cabinets:	Front bezel assembly	996510008733	34W0ZRLB036	W0ZR BEZZL SUB ASSY(B-V)CN GP	1	Item 4 in exploded view	
	Back cover assembly	996510008736	EAW0ZR11015	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP	1	Item 19 in exploded view	
Accessories:	VGA cable	996510002083	DDL7ZIPC002	CABLE MB-VGA(15/15P,1.8M)BLACK L7ZI GP	1		
	Power cord	996500044139	DM333181S01	POWER CORD B 1.8M SP-506/10A (CHN) GP	1		
	Manual		HGW0ZR05011	CD+QSG W0ZR-V1C (HGW0ZR05,R3A)WW_GP	1		
	LCD film		JXW0ZB01019	LCD FILM W0ZB-A1(JXW0ZB01,REV3A)GP	1		
Packing Material:	EPE bag		HAW0ZR01010	EPE BAG W0ZR(HAW0ZR01,R3A)GP	1		
	Carton	996510008737	HFW0ZR25011	CARTON W0ZR-V1C M(HFW0ZR25,R3A)CN GP	1		
	Cushion-L	996510008738	HBW0ZR03013	CHINA END CAP-L W0ZR(HBW0ZR03,REV3A)GP	1		
	Cushion-R	996510008739	HBW0ZR04010	CHINA END CAP-R W0ZR(HBW0ZR04,REV3A)GP	1		

>> MAIN BOARD ASSY

	WBTB M/B ASSY(W0ZR-V1,TSUM58WHJ)A/ONLYGP
	21WBTBMB117 W0ZR-V1 MB
	Schematic(TSUMU58WHJ)A/ONLYGP(A3A)
	WBTB M/B S/S ASSY(W0ZR-V1,TSUM58WHJ)GP
	PCB(M/B)WBTB (2L,98*90 REVA)TSUMU58WJ GP
	DAWBTBMB010 WBTB MB Gerber file & Board File
U4	IC(128P) TSUMU58WHJ-LF (165MHZ,PQFP) GP
U1	IC(3P) AIC1084PE(TO-252) GP
U1	IC(3P) ME1084DTA (TO-252) GP
Q3	TR,SMD 2SB1132PT(32V,1A) SOT 89 GP
Q3	TR,SMD 2SB1132T100R(32V,1A) SOT 89 GP
U6	IC EEPROM(8P) BR24L16F-WE2(2K*8,SOP8)GP
U6	IC EEPROM(8P)24LC16BT-I(2K*8,100KHZ) GP
U5	IC(8P)FROM SST25VF010A-33-4C-SAE SOIC8GP
U5	IC(8P)FLASH PM25LV010-33SCE(SOIC) GP
Q2	TR SMD PMBS3904(40V,200MA) GP
Q2	TR SMD SST3904(40V,200MA) GP
Q1	TR,SMD PMBS3906(40V,200MA) GP
Q7	TR,SMD PMBS3906(40V,200MA) GP
Q8	TR,SMD PMBS3906(40V,200MA) GP
Q1	TRANSISTOR,SMD SST3906(40V,200MA) GP
Q7	TRANSISTOR,SMD SST3906(40V,200MA) GP
Q8	TRANSISTOR,SMD SST3906(40V,200MA) GP
D2	DIODE,SMD LL4148PT(75V,0.15A) GP
D2	DIODE,SMD RLS4148 GP
D1	DIODE SSM12LLPT(20V,1A,VF:0.27V)SMA GP
D4	DIODE SSM12LLPT(20V,1A,VF:0.27V)SMA GP
Q4	TR MOSFET ME9435A(-30V,-5.3A)SOIC8 GP
Q5	TR CHDTC144EUPT(50V,30MA)SOT-323 GP
Q5	TRANSISTOR SMD DTC144EUA(50V,30MA) GP
D3	DIODE SMD BAT54C(30V,200MA,SCHOTTKY)GP
C66	CAP CHIP 22P 50V(+-5%,NPO,0603) GP
C67	CAP CHIP 22P 50V(+-5%,NPO,0603) GP
C23	CAP CHIP 33P 50V(+-5%,NPO,0603)GP
C24	CAP CHIP 33P 50V(+-5%,NPO,0603)GP
L9	RES CHIP 33 1/10W +-5%(0603) GP
L10	RES CHIP 33 1/10W +-5%(0603) GP
C9	CAP CHIP 2200P 50V(+-10%,X7R,0603)GP
C10	CAP CHIP 2200P 50V(+-10%,X7R,0603)GP
C13	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C14	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C15	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C17	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C18	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C19	CAP CHIP 0.047UF 16V(+-10%,X7R,0603) GP
C16	CAP CHIP 0.01U 50V(+-10%,X7R,0603) GP
C1	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C11	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C37	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C38	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C39	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C40	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C41	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C42	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C43	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C44	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C45	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C46	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C47	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C48	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C51	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C52	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C53	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C54	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C55	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C56	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C57	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C58	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C60	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C62	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C63	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C68	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C71	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C72	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C73	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C74	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C75	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C76	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C77	CAP CHIP 0.1U,25V(+80-20%,Y5V,0603) GP
C4	CAP CHIP 1UF 25V(+-20%,Y5V,0805) GP
C64	CAP CHIP 10UF 10V(+-20%,Y5V,0805)GP
R1	RES CHIP 0 1/4W+-5%(3216) GP
FB1	RES CHIP 0 1/10W+-5%(0603) GP
R2	RES CHIP 0 1/10W+-5%(0603) GP
R9	RES CHIP 0 1/10W+-5%(0603) GP
R10	RES CHIP 0 1/10W+-5%(0603) GP
R75	RES CHIP 0 1/10W+-5%(0603) GP
R77	RES CHIP 0 1/10W+-5%(0603) GP
R107	RES CHIP 0 1/10W+-5%(0603) GP
R7	RES CHIP 47 1/10W +-5%(0603) GP
R27	RES CHIP 56 1/10W +-1%(0603) GP
R29	RES CHIP 56 1/10W +-1%(0603) GP
R31	RES CHIP 56 1/10W +-1%(0603) GP
R34	RES CHIP 75 1/10W +-1%(0603) GP
R35	RES CHIP 75 1/10W +-1%(0603) GP
R36	RES CHIP 75 1/10W +-1%(0603) GP
R37	RES CHIP 100 1/10W+-1%(0603)GP
R38	RES CHIP 100 1/10W+-1%(0603)GP
R39	RES CHIP 100 1/10W+-1%(0603)GP
R13	RES CHIP 100 1/10W +-5%(0603) GP
R48	RES CHIP 100 1/10W +-5%(0603) GP
R49	RES CHIP 100 1/10W +-5%(0603) GP
R83	RES CHIP 100 1/10W +-5%(0603) GP
R84	RES CHIP 100 1/10W +-5%(0603) GP
R17	RES CHIP 200 1/10W+-1%(0603) GP
R18	RES CHIP 330 1/10W +-1%(0603) GP
R72	RES CHIP 390 1/10W+-1%(0603) GP
R33	RES CHIP 470 1/10W+-5%(0603) GP
L2	RES CHIP 1K 1/10W +-5%(0603) GP
L3	RES CHIP 1K 1/10W +-5%(0603) GP
L4	RES CHIP 1K 1/10W +-5%(0603) GP
L5	RES CHIP 1K 1/10W +-5%(0603) GP
L6	RES CHIP 1K 1/10W +-5%(0603) GP
L7	RES CHIP 1K 1/10W +-5%(0603) GP
L8	RES CHIP 1K 1/10W +-5%(0603) GP
R4	RES CHIP 1K 1/10W +-5%(0603) GP
R8	RES CHIP 1K 1/10W +-5%(0603) GP
R42	RES CHIP 1K 1/10W +-5%(0603) GP
R43	RES CHIP 1K 1/10W +-5%(0603) GP
R12	RES CHIP 2K 1/10W +-5%(0603) GP
R11	RES CHIP 2.2K 1/10W,+-1%(0603) GP
R24	RES CHIP 2.2K 1/10W,+-1%(0603) GP
R44	RES CHIP 2.2K 1/10W,+-1%(0603) GP
R45	RES CHIP 2.2K 1/10W,+-1%(0603) GP
R81	RES CHIP 3.3K 1/10W +-5%(0603) GP
R82	RES CHIP 3.3K 1/10W +-5%(0603) GP
R78	RES CHIP 20K 1/10W +-1%(0603) GP
R96	RES CHIP 4.7K 1/10W+-1%(0603) GP
R97	RES CHIP 4.7K 1/10W+-1%(0603) GP

Spare Part List

R28	EMI FILT CHP FCM1608CF-300T06 30,0.6A GP
R30	EMI FILT CHP FCM1608CF-300T06 30,0.6A GP
R32	EMI FILT CHP FCM1608CF-300T06 30,0.6A GP
R3	RES CHIP 10K 1/10W +-5%(0603) GP
R5	RES CHIP 10K 1/10W +-5%(0603) GP
R6	RES CHIP 10K 1/10W +-5%(0603) GP
R22	RES CHIP 10K 1/10W +-5%(0603) GP
R23	RES CHIP 10K 1/10W +-5%(0603) GP
R73	RES CHIP 10K 1/10W +-5%(0603) GP
R74	RES CHIP 10K 1/10W +-5%(0603) GP
R76	RES CHIP 10K 1/10W +-5%(0603) GP
R80	RES CHIP 10K 1/10W +-5%(0603) GP
R86	RES CHIP 10K 1/10W +-5%(0603) GP
R87	RES CHIP 10K 1/10W +-5%(0603) GP
R88	RES CHIP 10K 1/10W +-5%(0603) GP
R89	RES CHIP 10K 1/10W +-5%(0603) GP
R90	RES CHIP 10K 1/10W +-5%(0603) GP
R91	RES CHIP 10K 1/10W +-5%(0603) GP
R92	RES CHIP 10K 1/10W +-5%(0603) GP
R93	RES CHIP 10K 1/10W +-5%(0603) GP
R94	RES CHIP 10K 1/10W +-5%(0603) GP
R95	RES CHIP 10K 1/10W +-5%(0603) GP
R106	RES CHIP 10K 1/10W +-5%(0603) GP
FB2	EMI FILT CHIP FBMA-11-201209-121A40 GP
FB3	EMI FILT CHIP FBMA-11-201209-121A40 GP
FB4	EMI FILT CHIP FBMA-11-201209-121A40 GP
FB5	EMI FILT CHIP FBMA-11-201209-121A40 GP
L1	EMI FILT CHIP FBMA-11-201209-121A40 GP
R20	EMI FILT CHIP FBMA-11-201209-121A40 GP
X1	XTAL DIP 14.318MHZ(+-20PPM,49/US) GP
X1	XTAL DIP 14.318MHZ(+-30PPM,49/S) GP
C5	CAP EC 4.7U 50V(+-20%,105C,5*11,3K)OSTGP
C50	CAP EC 4.7U 50V(+-20%,105C,5*11,3K)OSTGP
C59	CAP EC 4.7U 50V(+-20%,105C,5*11,3K)OSTGP
C5	CAP EC 4.7U 16V(+-20%,105C,5*11,3KHR) GP
C50	CAP EC 4.7U 16V(+-20%,105C,5*11,3KHR) GP
C59	CAP EC 4.7U 16V(+-20%,105C,5*11,3KHR) GP
C36	CAP EC 10U 35V(+-20%,105C,5*11,2KHR)GP
C49	CAP EC 10U 35V(+-20%,105C,5*11,2KHR)GP
C36	CAP EC 10U 50V(+-20%,105C,5*11,2K)OSTGP
C49	CAP EC 10U 50V(+-20%,105C,5*11,2K)OSTGP
C7	CAP EC 330U 16V(+-20%,105C,8*11,LESR)GP
C8	CAP EC 330U 16V(+-20%,105C,8*11,LESR)GP
C12	CAP EC 330U 16V(+-20%,105C,8*11,LESR)GP
C7	CAP EC 330U 16V(+-20%,105C,8*12,2K)OSTGP
C8	CAP EC 330U 16V(+-20%,105C,8*12,2K)OSTGP
C12	CAP EC 330U 16V(+-20%,105C,8*12,2K)OSTGP
CN1	CONN DIP HEADER 8P 2R FR(P2.54,H5)HJQ GP
CN1	CONN DIP HEADER 8P 2R FR(P2.54,H5.0) GP
CN2	CONN DIP HEADER 30P 2R MR(P2.0,H4.0) GP
CN2	CONN DIP HEADER 30P 2R MR(P2.0,H4)HJQ GP
CN7	CONN DIP HEADER 8P 2R FR(P1.0,H3.0)GP
CN3	CONN D-SUB 15P 3R FR(P1.15,H12.55) GP
CN3	CONN D-SUB 15P 3R FR(P1.15,H12.55) GP

>> POWER BOARD ASSY

	ADP/INV 43W FSP043-2PI01P,90~264V GP

>> BUTTON BOARD ASSY

	W0ZR BUTTON/B ASSY GP
	23W0ZRBB001 W0ZR BUTTON/B Schematic(A3A)
	PCB(BUTTON)W0ZR(2L,125.5*12.55 REV.A)GP
	DAW0ZRTB015 W0ZR Button/B Gerber file & Board File
LED1	LED(SMD) Y/G(KPTB-1612NSGC) GP
CON1	CABLE FFC MB-BB(8P/8P,562MM) GP
	METAL DOME SWITCH WBZR(FCWBZR01,3A)GP
	METAL DOME SWITCH

>> LCD MODULE ASSY

	W0ZR LCD MODULE ASSY(B-V)CPT GP
	W0ZR LCD BZEZL SUB-ASSY(B-V)GP
	W0ZR LCD BZEZL SUB-ASSY(B-V)GP
	LCD BEZEL(B-V) W0ZR (EAW0ZR01,REV3A)GP
	LCD BEZEL
	CONTROL BUTTON-G/B W0ZR(EBW0ZR01,R3A)GP
	CONTROL BUTTON
	LED LENS W0ZR(EBW0ZR02,REV3A)GP
	LED LENS W0ZR
	LCD BEZEL(B-V) W0ZR (EAW0ZR01,REV3A)GP
	LCD BEZEL
	CONTROL BUTTON-G/B W0ZR(EBW0ZR01,R3A)GP
	CONTROL BUTTON
	LED LENS W0ZR(EBW0ZR02,REV3A)GP
	LED LENS W0ZR
	W0ZR PCB SHIELDING ASSY(C-V) GP
	LCD BRACKET C-V W0ZR(FAW0ZR09,R3A)GP
	PCB MYLAR W0F(FCW0F001,REV3A)GP
	PCB MYLAR
	WBZR STAND SUB ASSY GP
	WBZR STAND SUB ASSY
	STAND W0ZR(EBW0ZR04,REV3A)GP
	STAND W0ZR
	ABS V0 80206 BLACK
	G2-BOX(57*45*37)
	PE-BAG-25*28
	PARTITION-BOARD(54*44)
	2-REAMER-CLIP-L5T STAND
	6-REAMER-CLIP-L5T STAND
	HINGE ASSY WBF-C1(FAWBF005,REV3A)GP
	HINGE ASSY
	SCREW M4.0*10-T(MC)GP
	SCREW M4.0*10-T(MC)
	LCD COVER VGA W0ZR(EAW0ZR11,REV3A)GP
	HINGE COVER W0ZR(EBW0ZR05,REV3A)GP
	HINGE COVER W0ZR
	ABS V0 80206 BLACK
	D4-BOX(42*27.5*23)
	PARTITION-BOARD(43*17.5)
	PE-BAG-9*19
	POWER MYLAR W0ZR(FCW0ZR02,REV3A)GP
	POWER MYLAR
	TIE WIRE W0ZR(JXW0ZR07,REV3A) GP
	TIE WIRE
	SCREW M3.0*5.0-I(NI) GP
	SCREW F3.0*6.0-T(MC)GP
	IO NUT LI1(MBLI1004,REV3A)GP
	IO NUT LI1
	SCREW M4.0*8.0-B(NI,WASHER)GP
	SCREW F2*2.5-I(NI) GP
	CABLE MB-POWER/B(8P/8P,180MM)W0ZR GP

>> **CHASSIS ASSY**

W0ZR CHASSIS ASSY GP
INVERTER SHIELD W0ZR(FBW0ZR01,REV3A)GP
INVERTER SHIELD
SCREW M3.0*5-F(BNI) GP
SCREW M4.0*10-B BLACK (NYLOK)GP
SCREW M4.0*10,F(NI,NYLOK) GP
SCREW M3.0*5.0-I(NI) GP
SCREW M3.0*4.0-I GP
SCREW M3.0*4.0-I
SCREW M3.0*4.0-I
RUBBER W0ZR(GAW0ZR01,REV3A)GP
RUBBER W0ZR

>> **PANEL KIT ASSY**

W0ZR-V1C PANEL KIT ASSY(CPT,5MS)A/ONLYGP
LCD(TFT)20" CLAA201WA04-000(WSXGA) GP
W0ZR-V1C SW BIOS IMAGE(TSUMU58WHJ)CPT
W0ZR-A1 SW EDID IMAGE(TSUMU58WHJ)AU
CABLE MB-LCD(30P,150MM)L9E-A1 GP
CABLE LVDS(30P,150MM,LINKTEC AU)L9EA1 GP
AL FOIL L9VDQ-4(FCL9V005,R3A)100*80 GP
AL FOIL 100*80

>> **PACKING ASSY**

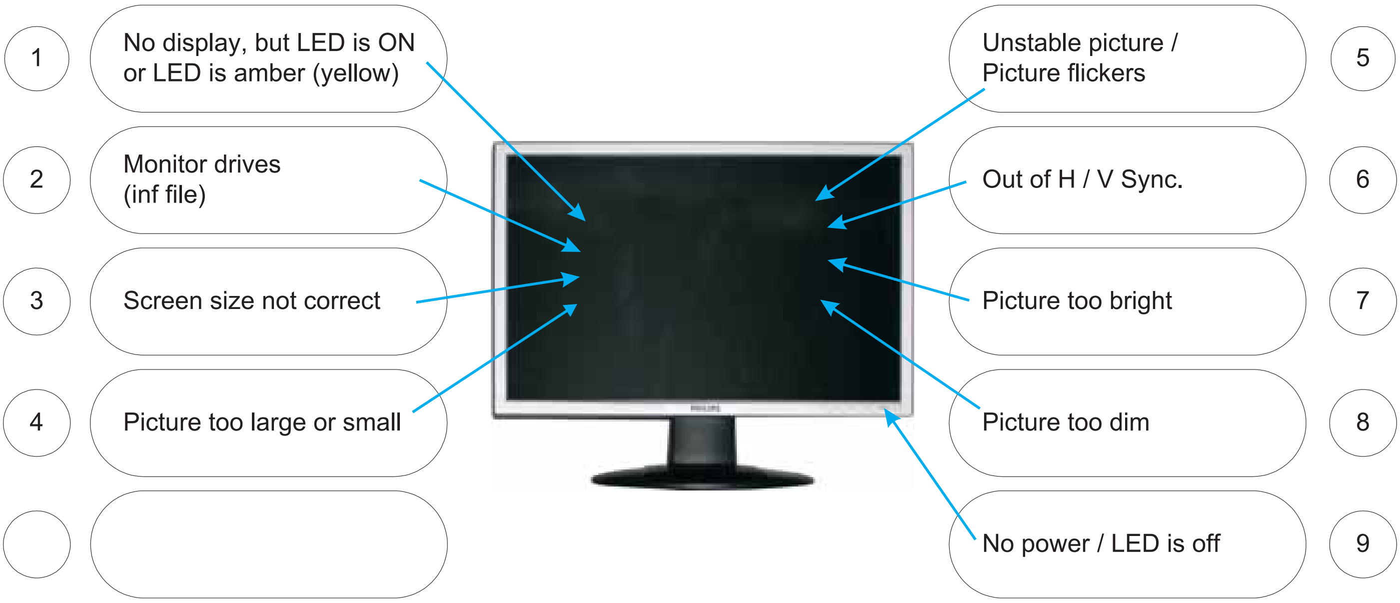
W0ZR-V1C PACKING(200VW8FB/00,AP/EU) GP
WBZR BASE SUB ASSY GP
WBZR BASE SUB ASSY
BASE W0ZR(EAW0ZR03,REV3A)GP
BASE W0ZR
RUBBER WBZR(GAWBZR02,REV3A)GP
RUBBER WBZR
BASE-LOCK W0ZR(EBW0ZR03,REV3A)GP
BASE-LOCK W0ZR
SCREW F4.0*6-I(NI)GP
RUBBER FOOT WBZR(GAWBZR01,REV3A) GP
RUBBER FOOT WBZR
END CAP-L W0ZR(HBW0ZR01,REV3A)GP
END CAP-L W0ZR
END CAP-R W0ZR(HBW0ZR02,REV3A)GP
END CAP-R W0ZR
EPE BAG W0ZR(HAW0ZR01,R3A)GP
EPE BAG
TRAVEL CARD L7ZI(HCL7ZI04,REV3A) GP
TRAVEL CARD
HANDLE UPPER W9C-B1(JXW9C001,REV3A)GP
HANDLE UPPER
HANDLE DOWN W9C-B1(JXW9C002,REV3A)GP
HANDLE DOWN
CARTON W0ZR-V1C (HFW0ZR30,R3A)WW_GP
SPACE PLATE1361X1055W0ZR(HFW0ZR03,R3A)GP
SPACE PLATE
SPACE PLATE909X1055W0ZR(HFW0ZR04,R3A)GP
SPACE PLATE
PAPER BOARD1366*1060W0ZR(HFW0ZR10,R3A)GP
PAPER BOARD
PAPER BOARD914*1060W0ZR(HFW0ZR11,R3A)GP
PAPER BOARD
CD+QSG W0ZR-V1C (HGW0ZR05,R3A)WW_GP
ENERGY START STICKER W0ZR(HCW0ZR04,3A)GP
ENERGY START STICKER
RATING LABEL W0ZR-V1C (HCW0ZR09,R3A) GP
RATING LABEL
CARTON LABEL W0ZR(HCW0ZR03,REV3A)GP
CARTON LABEL
LCD FILM W0ZB-A1(JXW0ZB01,REV3A)GP
LCD FILM
CABLE MB-VGA(15/15P,1.8M)BLACK L7ZI GP
PWR CORD B 1.8M SP-023/16A CT-12 EUR GP
HI-POT LABEL L70L(HCL70021,REV3A)GP
HI-POT LABEL
TYPE L7ZI-A1(JXL7ZI04,REV3A)(72MM) GP

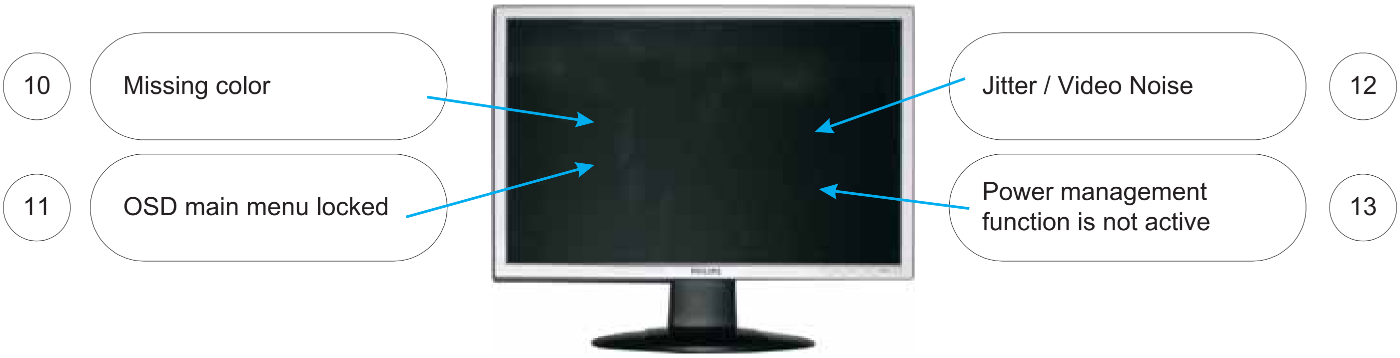
Different Part List

20 inch monitor different parts list

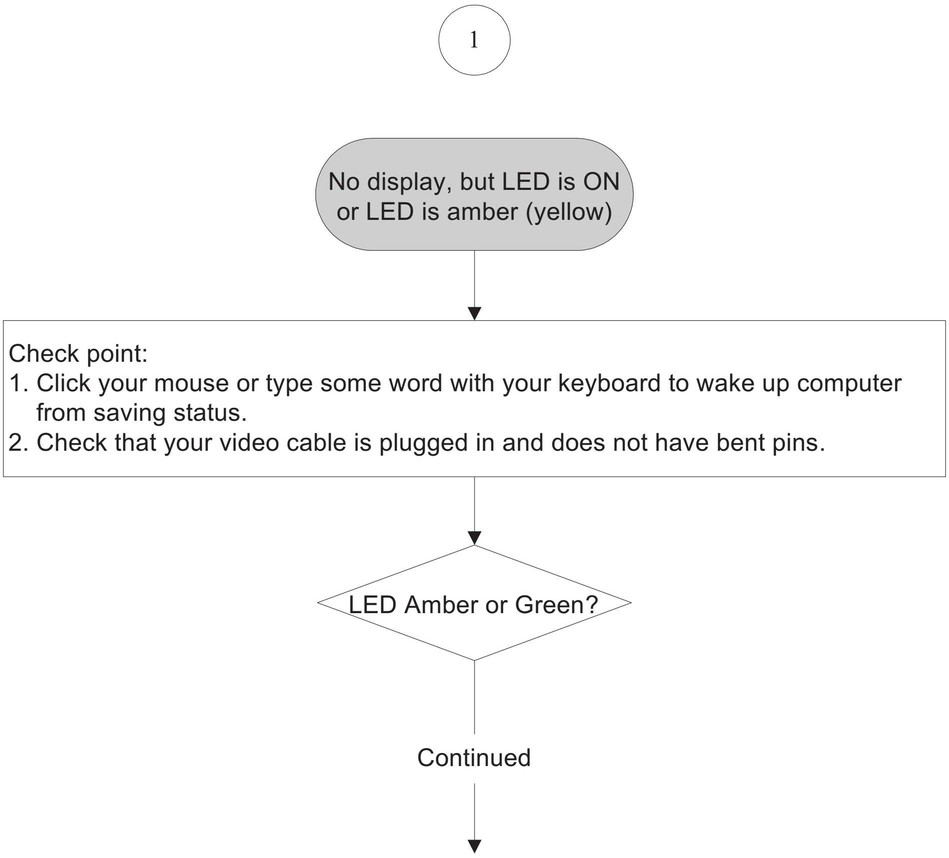
Item	Part Number	Part Description	2nd source	200VW8FB/00,AP/EU(W0ZR-V1C)	200VW8FB/00,AP/EU(W0ZR-V1)	200VW8FB/93,CN(W0ZR-V1)	200VW8FB/93,CN(W0ZR-V1C)
1	24W0ZRLA0L1	W0ZR LCD MODULE ASSY(B-V)CPT GP		V			
	24W0ZRLA0K3	W0ZR LCD MODULE ASSY(B-V)AUO GP			V		
	24W0ZRLA0G2	W0ZR LCD MODULE ASSY(B-V)AUO CN GP				V	
	24W0ZRLA0H1	W0ZR LCD MODULE ASSY(B-V)CPT CN NEW GP					V
2	2AW0ZRPTC44	W0ZR-V1C PANEL KIT ASSY(CPT,5MS)A/ONLYGP		V			V
	2AW0ZRPTA40	W0ZR-V1 PANEL KIT ASSY(AU,5MS)A/ONLY GP			V	V	
	2AW0ZRPTL39	W0ZR-V1 PANEL KIT ASSY(LPL,5MS)A/ONLYGP	2nd source		V	V	

General Trouble Shooting Guide



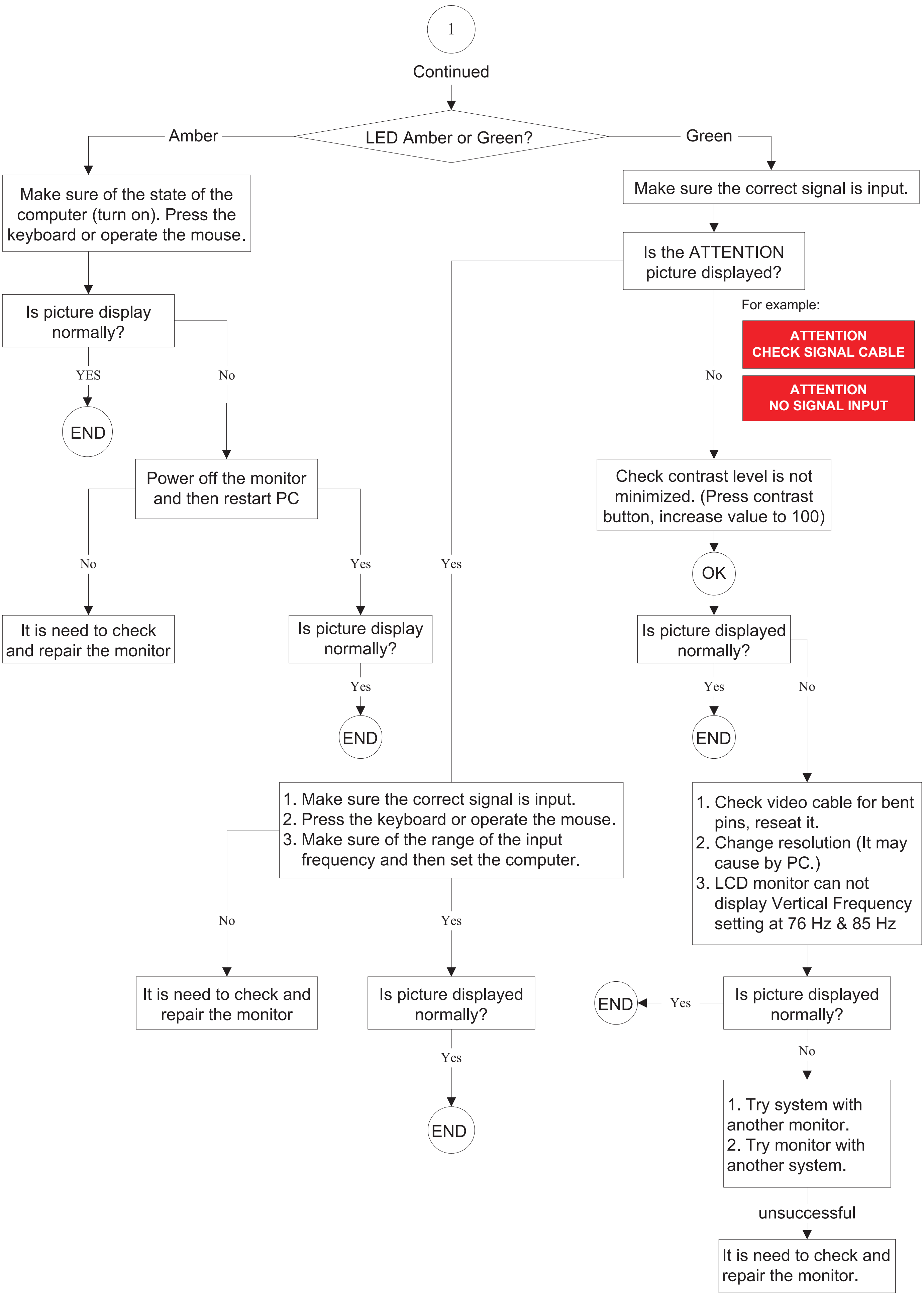


General Trouble Shooting Guide



Note:
Do not set screen saver – at “14” minutes.
It will cause “ no display” problem as above mentioned.
Action: Change timer setting of screen saver or disable screen saver.

General Trouble Shooting Guide



General Trouble Shooting Guide

2

Monitor drivers (inf file)

FOR WINDOWS 95/98/2000/ME OR LATER

Philips's monitors build in VESA DDC2B feature to support Plug & Play requirement for Windows 95/98/2000/Me. You can install the information file(.inf) in order to select your Philips monitor from "Monitor" dialog box in Windows 95/98/2000/Me to activate Plug & Play application. The installation procedure based on Windows 95 OEM Release 2, 98, Me and 2000 is specified as follows, (in case of connecting the monitor to the PC compliant with VESA standard with the designated signal cable, the PC reads display pixels, frequency and color feature of this monitor to optimize the picture for the monitor automatically.)

DDC: Abbreviation for Display Data Channel

**** Windows NT 4.0 does not require driver (inf file) for monitor.****

For Windows 95

For Windows 95 drivers, your monitor is listed under manufacture name "Philips Business Electronics Co.".

1. Start Windows 95
2. Click the 'Start' button, point to 'setting', and then click 'control panel'.
3. Double click the 'display' Icon.
4. Choose the 'setting' tab then click 'advanced…'
5. Choose 'monitor' button, point to 'change…' then click 'have disk…'.
6. Click 'browse…' button then choose the appropriate drive F:(CD-ROM Drive) then click 'ok' button.
7. Click the 'ok' button then choose your monitor model and click the 'ok'.
8. Click 'close' button.

For Windows 98

For Windows 98 drivers, our monitors are listed under 2 manufactures name "Philips", and "Philips Consumer Electronics Co." Please select "Philips" when you would like to set up your monitor in Windows setting, if you can not find the right model name just as the label indication on the back of set. For those set that have been issued since the release of Window 98, drivers can be found in CD-ROM under the directory path of "\pc\driver\" or it may be downloaded at http://www.philips.com. Once you have installed the new driver, Windows will add a new manufacture name "Philips Business Electronics" in your system.

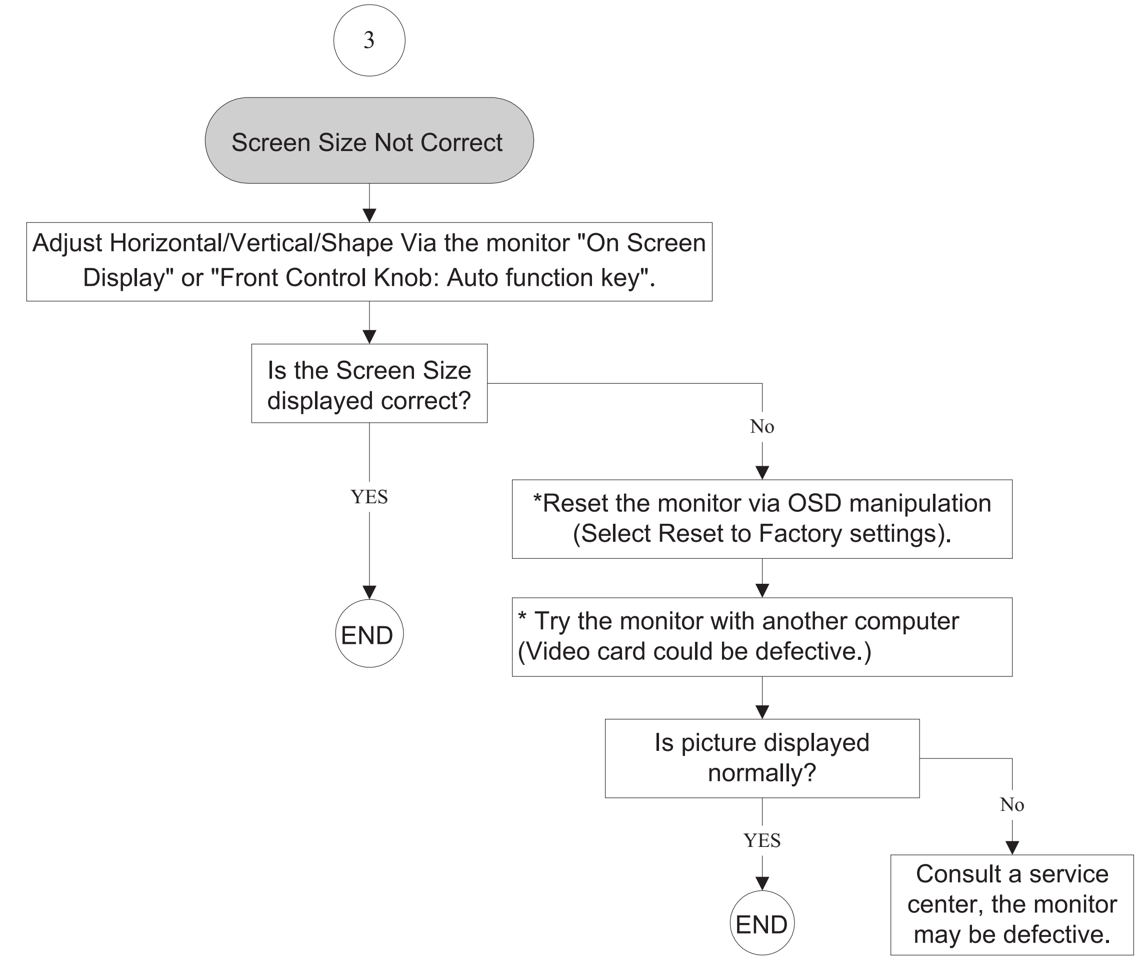
1. Start Windows 98
2. Click the 'Start' button, point to 'setting', and then clock 'control panel'.
3. Double click the 'display' Icon.
4. Choose the 'setting' tab then click 'advanced…'
5. Choose 'monitor' button, point to 'change…' then click 'next'.
6. Choose 'display a list of all the drivers in a specify location, so you can select the driver you want', then click 'next' and then click 'have disk…'
7. Click 'browse…' button then choose the appropriate drive F: (RD-ROM Drive) then click 'ok" button.
8. Click the 'ok' button then choose your monitor model and click the 'next' button.
9. Click 'finish' button then click 'close' button.

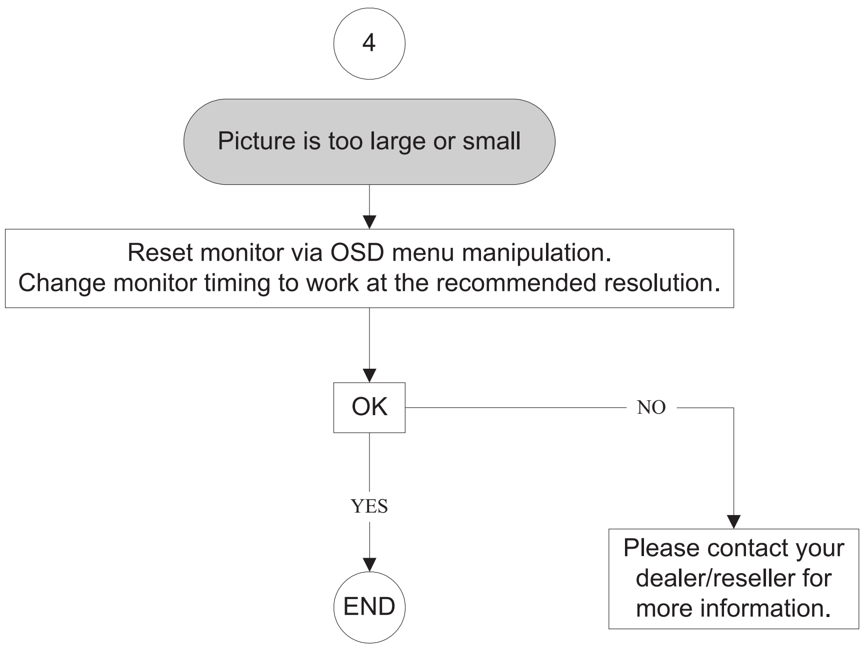
For Window Me

1. Start Window Me
2. Click the 'start' button, point to 'setting' , and then click 'control panel'.
3. Double click the 'display' Icon.
4. Choose the 'setting' tab then click 'advanced…'.
5. Choose 'monitor' button, then click 'change…' button.
6. Choose 'specify the location of the driver (advanced)' and click the 'next' button.
7. Choose 'display a list of all the drivers in a specific location, so you can select the driver you want', then click 'next' and then click 'have disk…'.
8. Click 'browse…' button then choose the appropriate drive F: (CD-ROM Drive) then click 'ok' button.
9. Click the 'ok' button then choose your monitor model and click the 'next' button.
10. Click 'finish' button then click 'close' button.

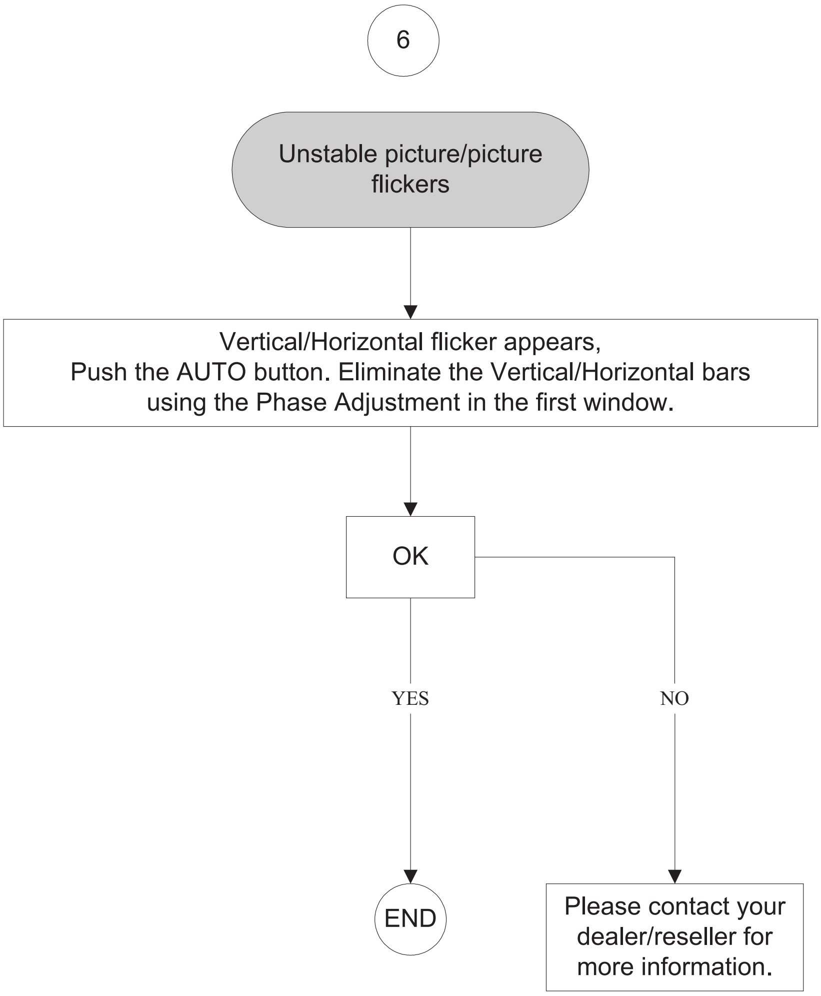
For Windows 2000

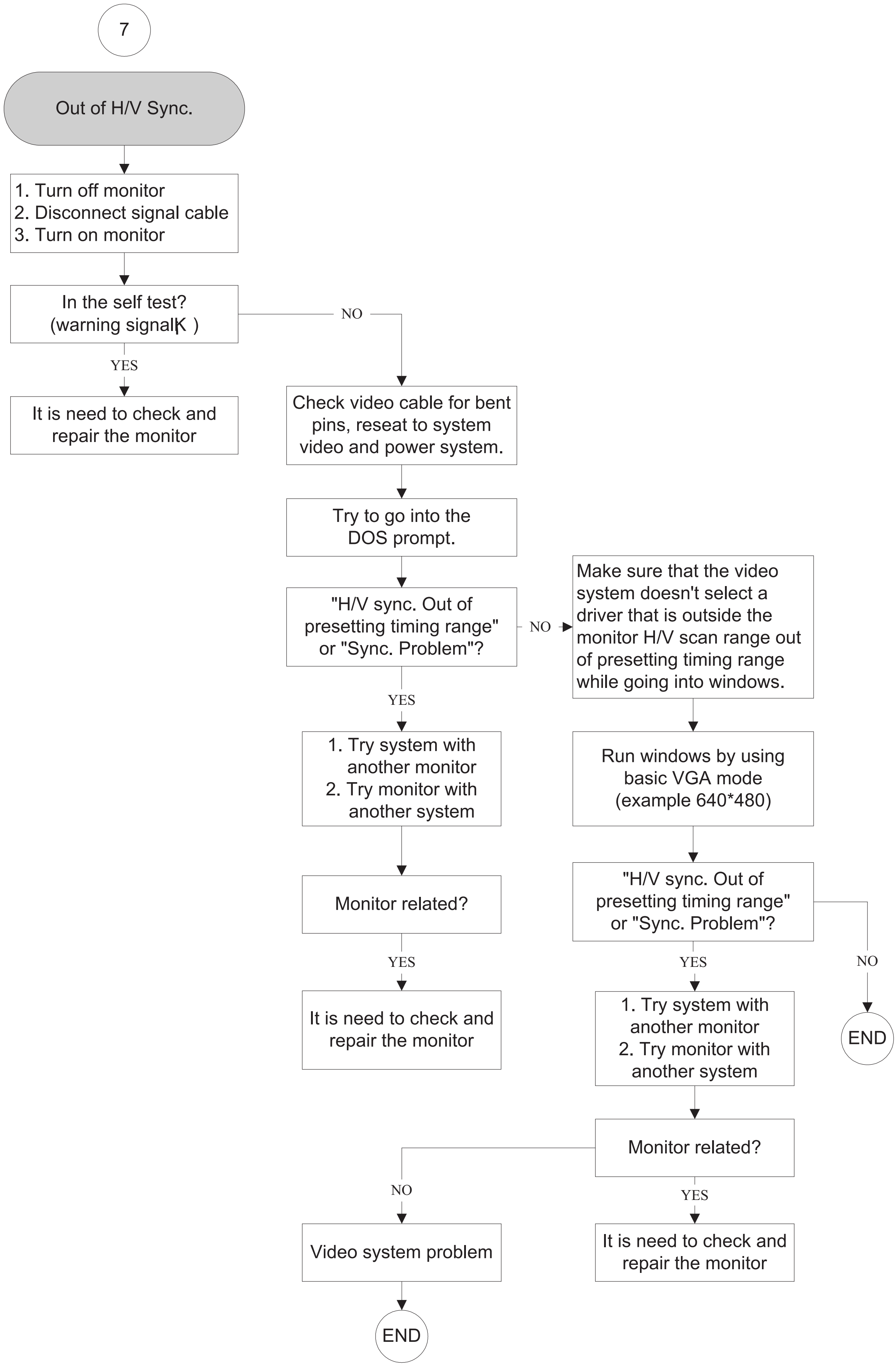
1. Start Windows 2000
2. Click the 'start' button, point to 'setting', and then click 'control panel'.
3. Double click the 'display' Icon.
4. Choose the 'setting' tab then click 'advanced…'.
5. Choose 'monitor;
   - If the 'properties' button is inactive, it means your monitor is properly configured. Please stop installation.
   - If the 'properties' button is active, click 'properties' button.
6. Click 'driver' and then click on 'update driver…' then click on the 'next' button.
7. Choose 'display a list of the known drivers for this device so that I can choose a specific driver' then click 'next' and then click 'have disk…'.
8. Click 'browse…' button then choose the appropriate drive F: (CD-ROM Drive).
9. Click the 'open' button then click the 'ok' button.
10. Choose your monitor model and click the 'next' button.
11. Click 'finish' button and then click the 'close' button. If you can see the 'digital signature not found' window then click the 'yes' button.


3
Screen Size Not Correct
Adjust Horizontal/Vertical/Shape Via the monitor "On Screen Display" or "Front Control Knob: Auto function key".
Is the Screen Size displayed correct?
YES
END
No
*Reset the monitor via OSD manipulation (Select Reset to Factory settings).
* Try the monitor with another computer (Video card could be defective.)
Is picture displayed normally?
YES
END
No
Consult a service center, the monitor may be defective.


4
Picture is too large or small
Reset monitor via OSD menu manipulation.
Change monitor timing to work at the recommended resolution.
OK
YES
END
NO
Please contact your dealer/reseller for more information.

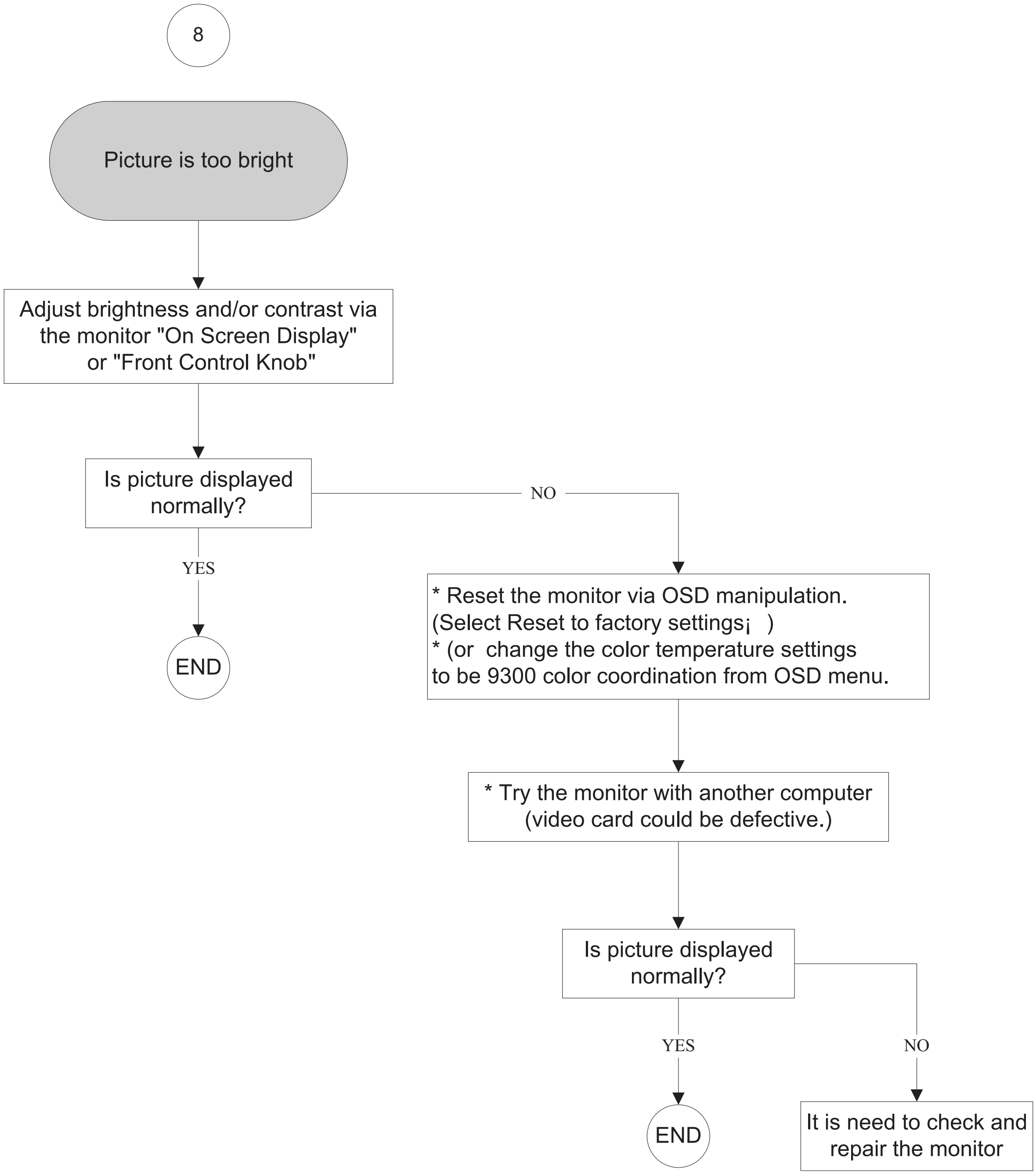
General Trouble Shooting Guide



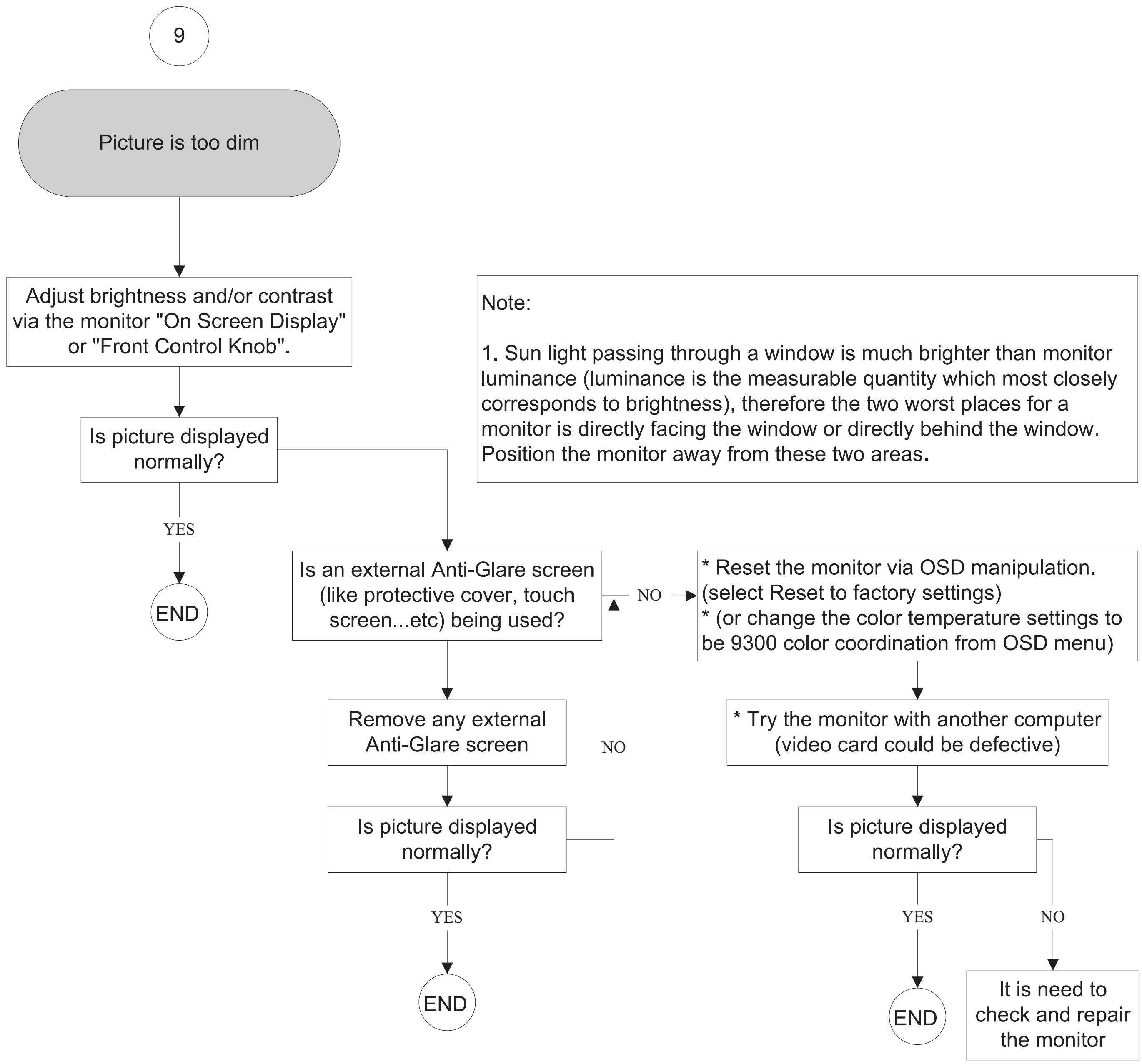


7
Out of H/V Sync.
1. Turn off monitor
2. Disconnect signal cable
3. Turn on monitor
In the self test?
(warning signal K)
NO
YES
It is need to check and repair the monitor
Check video cable for bent pins, reseat to system video and power system.
Try to go into the DOS prompt.
"H/V sync. Out of presetting timing range" or "Sync. Problem"?
NO
Make sure that the video system doesn't select a driver that is outside the monitor H/V scan range out of presetting timing range while going into windows.
YES
1. Try system with another monitor
2. Try monitor with another system
Run windows by using basic VGA mode (example 640*480)
Monitor related?
"H/V sync. Out of presetting timing range" or "Sync. Problem"?
YES
YES
NO
It is need to check and repair the monitor
1. Try system with another monitor
2. Try monitor with another system
END
Monitor related?
NO
YES
Video system problem
It is need to check and repair the monitor
END

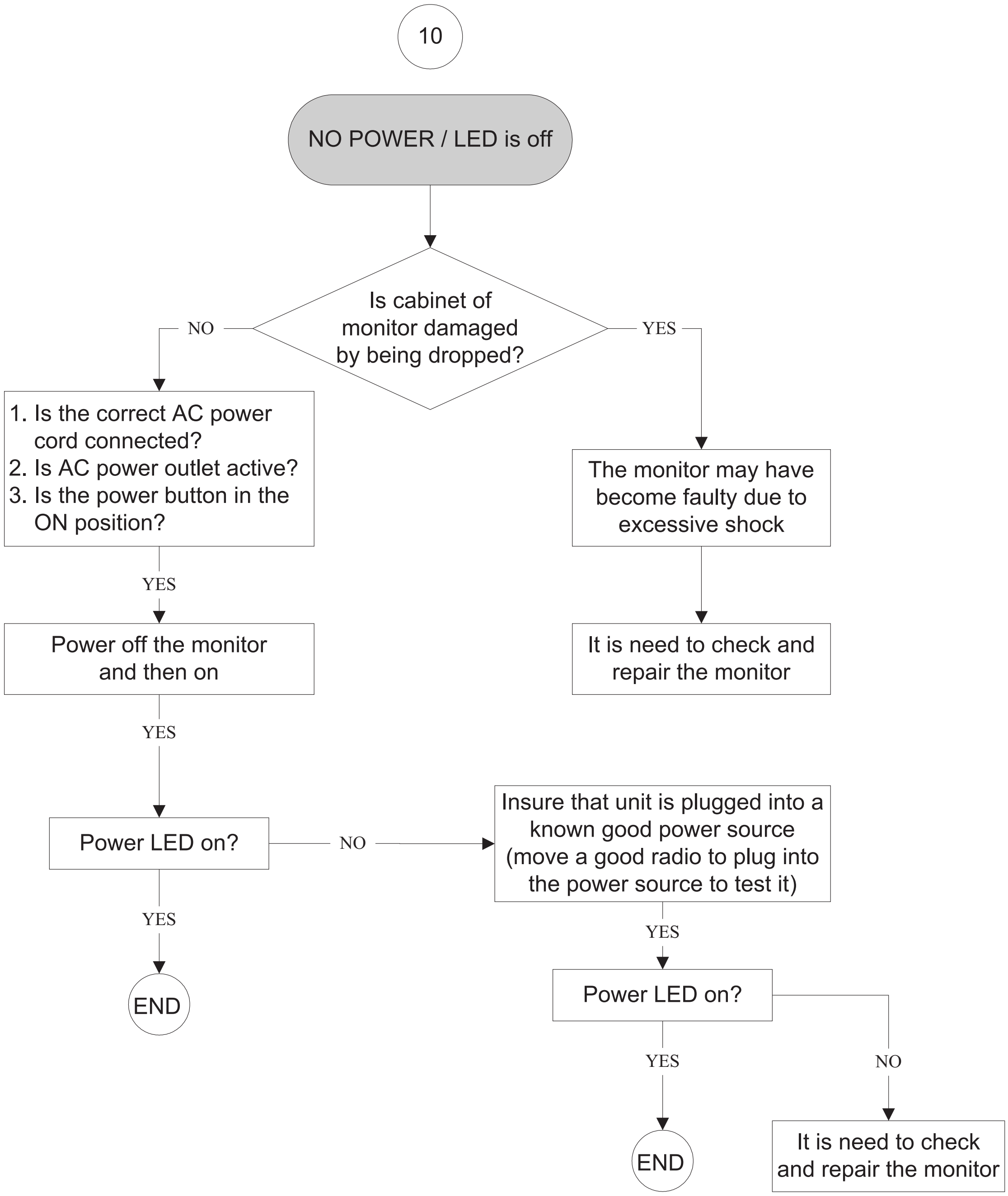
General Trouble Shooting Guide



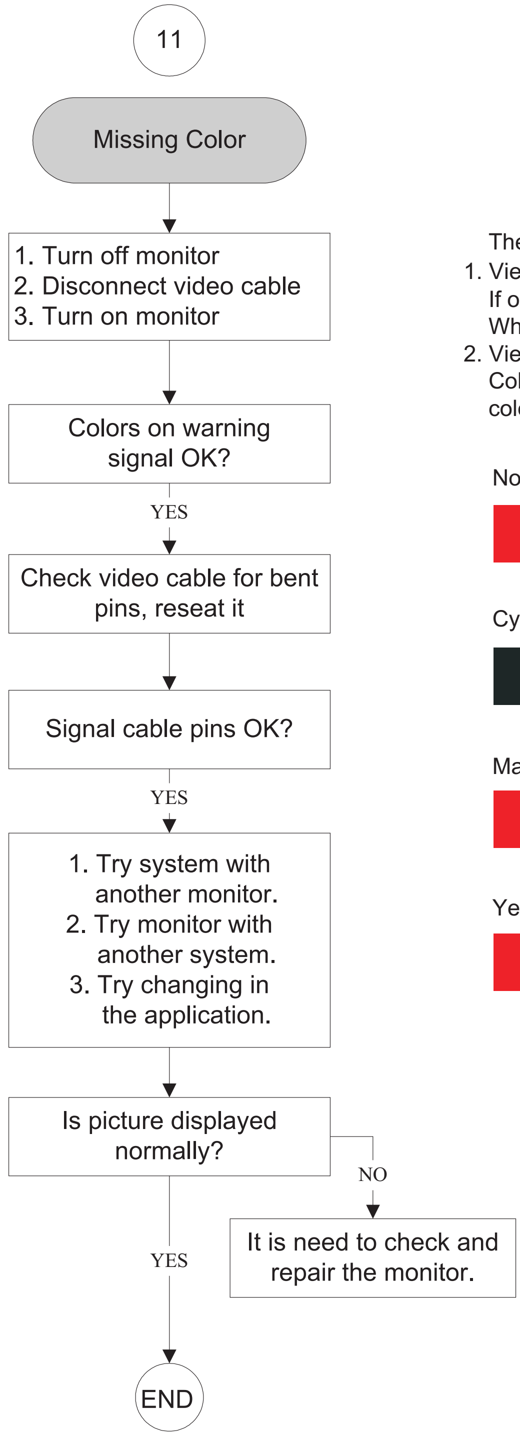
General Trouble Shooting Guide



General Trouble Shooting Guide



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There are 2 easy ways to determine the Missing color problem.

1. View an image that is supposed to be "White".
   If one of the colors (RGB) is not functioning.
   White can not be produced.
2. View an image that supposed to contain Red, Green and Blue.
   Color problems will be apparent when one or more of these colors can not be displayed.

Normal White:

RED + GREEN + BLUE = WHITE

Cyan Color means that the red sub pixel is missing.

RED + GREEN + BLUE = Cyan

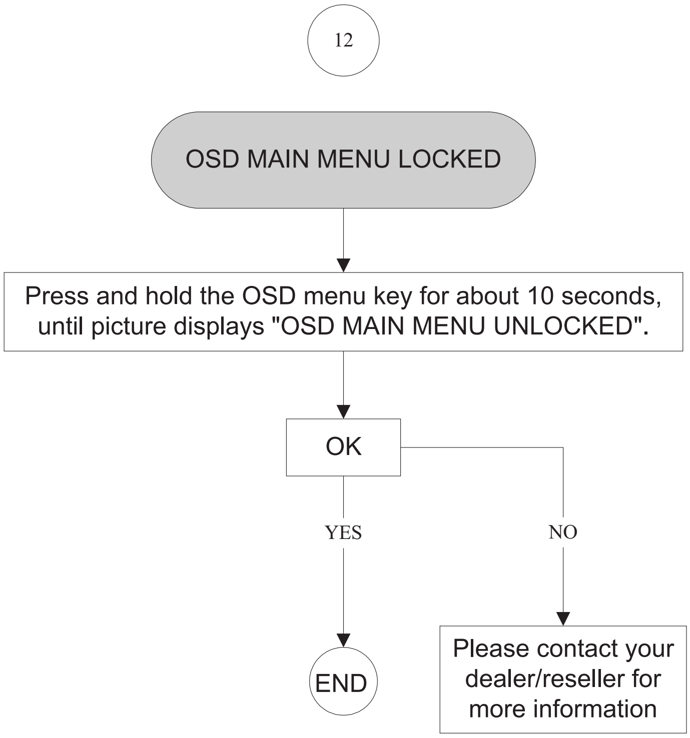
Magenta or Purple Color means that the green sub pixel is missing.

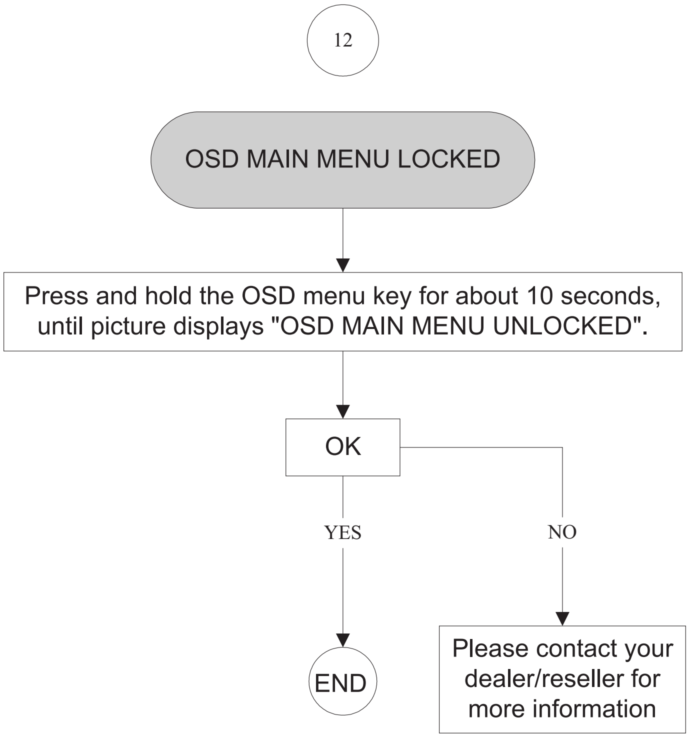
RED + GREEN + BLUE = Magenta

Yellow Color means that the blue sub pixel is missing.

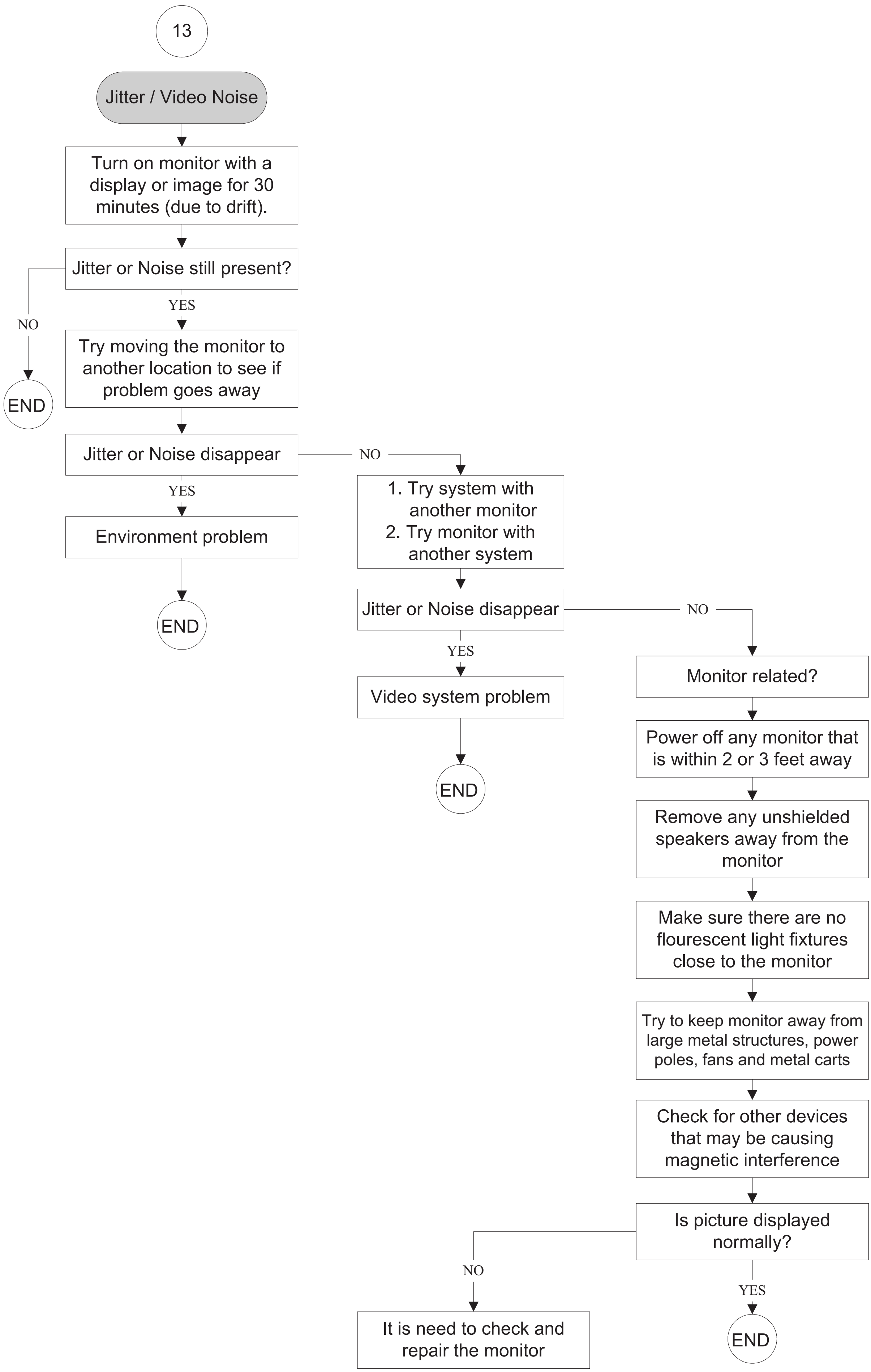
RED + GREEN + BLUE = Yellow

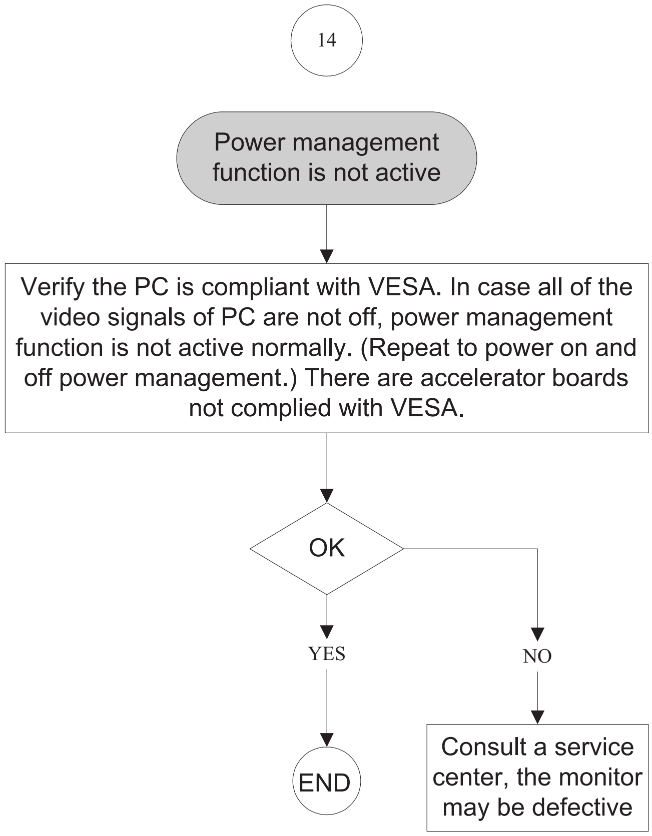
General Trouble Shooting Guide




12
OSD MAIN MENU LOCKED
Press and hold the OSD menu key for about 10 seconds, until picture displays "OSD MAIN MENU UNLOCKED".
OK
YES
NO
END
Please contact your dealer/reseller for more information

General Trouble Shooting Guide





14
Power management function is not active
Verify the PC is compliant with VESA. In case all of the video signals of PC are not off, power management function is not active normally. (Repeat to power on and off power management.) There are accelerator boards not complied with VESA.
OK
YES
NO
END
Consult a service center, the monitor may be defective

General Product Specification

Specification for TVI W0ZR- V1C/V1
Philips Hudson 8 – 200VW8

20'' TFT LCD Monitor,
30 - 93 kHz, 56 - 76 Hz, Dual input

Table of Contents

1. PRODUCT SPECIFICATION

1.1 Relationship

Supplier: TVI Model: W0ZR- V1C/V1
Customer: Philips Model: Hudson 8 -200VW8

- Monitor No: HWS8200Q
- Monitor ID: 200VW8FB/00
  200VW8FB/93

CTN	UPC/EAN
200VW8FB/00	EAN:87 12581 34816 8

- Site Code: CJ (TVE); CU (QCG)

1.2 Product Data

20" TFT LCD monitor

Horizontal frequency	30 - 93	KHz
Vertical frequency	56 – 76	Hz
Screen diagonal	20.1	Inch
Viewing Angle(CR>10)(H/V)	160/160	°
Max. opening horizontal picture size	438.44	mm
Max. opening vertical picture size	275.9	mm
Max. active horizontal picture size	433.44	mm
Max. active vertical picture size	270.9	mm

2. MECHANICAL SPECIFICATION

2.1.1 Monitor Housing

The front bezel and the back cabinet are based on TVI OEM tooling and Philips design chin.

2.1.2 VESA mounting holes

According to VESA FPMPMI standard.
Holes 100 mm x 100 mm (M 4.0, 0.7 pitch threaded) in the rear center for ARM.

2.1.3 Kensington Slot

The monitor is equipped with a 7 mm x 3 mm slot.

2.2 Tilt of the monitor

Forward	-5 ° +2/- 0
Backward	+25 °+0/- 3 °

2.3 Dimensions of monitor

The monitor has the following dimensions:
Unit dimension : 472.9mm (W) * 400.4mm (H) * 213.6mm (D)
Packed unit dimension: 525.0mm (W) * 174.0mm (H) * 452.0mm (D) for WW
: 555.0mm (W) * 190.0mm (H) * 472.0mm (D) for China
Net weight : 5 Kg (Including I/F cable 240 g)
Gross weight : 5.3 Kg for WW
: 5.3 Kg for China

3. LCD SPECIFICATION

3.1 LCD specification

Panel	AUO	LPL	CPT
	M201EW02_V8	LM201WE3-TLH2	CLAA201WA04
Resolution	1680x1050 (WSXGA+)	1680x1050 (WSXGA+)	1680x1050 (WSXGA+)
Active area (HxV)	433.44mm x 270.90mm	511.133	433.44mm x 270.90mm
Outside dimensions(WxHxD)	459.4 x 296.4 x 16.6 (mm)	459.4 x 296.4 x 16.5 (mm)	459.4 x 296.4 x 16.6 (mm)
Pitch (mm)	0.258 x 0.258	0.258 x 0.258	0.258 x 0.258
Display surface	Anti-Glare	Anti-Glare	Anti-Glare
Color depth	16.7M colors	16.7M colors	16.7M colors
Backlight	4 CCFL	4 CCFL	4 CCFL
Viewing angle	160 for H/V (Typ.)	160 for H/V (Typ.)	160 for H/V (Typ.)
Contrast ratio	1000:1 (Typ.); 800:1 (Min)	1000:1 (Typ.); 600:1 (Min)	1000:1 (Typ.); 600:1 (Min)
White luminance	300nit (Typ); 240nits (Min)	300nit (Typ); 250nits (Min)	300nit (Typ); 200nits (Min)
Color gamut	72%	72%	72%
Gate IC	Raydium (for 800) ; Toshiba (for 80A)	Philips	TBD
Source IC	Raydium (for 800) ; Novatec (for 80A)	Lusem	TBD
Response time	5ms	5ms	5ms

4 COSMETICS APPEARANCE

4.1 GAP definition

The gap between LCD and front bezel must be **<= 1.0mm**

4.2 Panel Offset

Panel Offset: Panel disposition tolerance inside the front bezel must be <=1.0mm

4.3 Horizontal tilt

Horizontal tilt between front bezel & LCD shall be <= 1.0mm

5. CONNECTORS

5.1 Video Connection

The monitor is equipped with a 15 pin mini D-SUB connector.

5.2 PIN Assignment

5.2.1 15 pin mini D-Sub connector

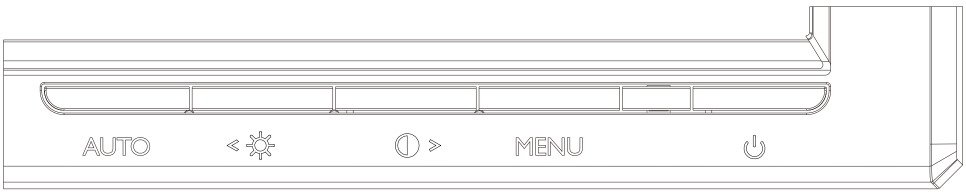
The PIN assignment of the 15 pin mini D-SUB connector / cable is as follows:

PIN No.	Description
1	Red
2	Green/ SOG
3	Blue
4	Sense (GND)
5	N/A
6	Red GND
7	Green GND
8	Blue GND
9	DDC +3.3V or +5V
10	Logic GND
11	Sense (GND)
12	Bi-directional data
13	H/H+V sync
14	V-sync
15	Data clock

6. OSD

6.1 Control of OSD

The positions and functions of the buttons are defined as below.



6.2 Adjustment Parameters

Hot-key definition

	Key	Key Press Time	OSD Timeout	EDFU	Service menu	OSD Message
Monitor Controls Lock	MENU/OK	6 sec (lock/unlock)	3 sec	V	V	MONITOR CONTROLS LOCKED /UNLOCKED
Factory Mode	AUTO+MENU+ Power On	Keep pressing when power on			V	
DDC/CI On/OFF for VISTA	UP+DOWN	6 sec (lock/unlock)	3 sec	V	V	DDC/CI ON/OFF

OSD Tree

1st LEVEL	2nd LEVEL	3rd LEVEL
MONITOR SETUP		
Exit		
Brightness & Contrast	Brightness	
	Contrast	
Color	Original Color, 9300K,6500K, sRGB, User Define	
Position	Horizontal	
	Vertical	
Input Selection	Analog(D-Sub), Digital (DVI-D)	
More Settings	Language	See SKU
	Phase/ Clock	Phase
		Clock
	OSD Settings	Horizontal
		Vertical
Reset	No	
	Yes	
Audio Option	Stand-alone	
(For selective model)	Mute	
	Volume	
Serial No.:		
(Serial No.)		
Timing Mode		
Up/Down to Move, ok to Confirm		

7. <u>ELECTRICAL SPECIFICATION</u>

7.1 Power Specification

7.1.1 AC-DC converter

Input voltage	90- 264V
Frequency range	50/ 60 ± 2 Hz
Inrush current	Shall be less than the ratings of critical components (including fuse, rectifiers and surge limiting device) for all conditions of line in voltage.
Maximum power consumption:	<50W (Max) / <43W (Typ.)

7.1.2 Power Management

Mode	HSYNC	VSYNC	Video	Pwr-cons.	Indication	Rec. time
Power-On	On	On	active	< 50W (<54W: for audio model)	Green LED	--
Off	Off	Off	blanked	< 1 W	Amber LED	< 5 s
DC Power Off			N/A	< 1 W	LED Off	

Remark: At first power on w/o signal LED will be orange blinking + message on screen.

7.2 Standard Test conditions

Unless otherwise specified, this specification is defined under the following conditions.

(1) Input signal : As defined in Timing table, 1680 x 1050 non-interlaced mode (1680X1050@60Hz 146.25MHz), signal sources must have 75 ohm output impedance.

(2) Luminance setting : controls to be set to 300 nits with full screen 100 % duty cycle white signal

(3) Warm up: more than 30 minutes after power on with signal supplied.

(4) Ambient light: 400 – 600 lux.

(5) Ambient temperature: 20 ± 5 °C

7.3 Test equipment

- ❑ Personal computer with Windows 98/2000/XP
- ❑ Luminance meter Minolta CA110
- ❑ Videogenerator: Chroma 2000, 2135, 2250 or equivalent
- ❑ Colour analyzer: Minolta or Chroma
- ❑ 10 times magnifier
- ❑ Ruler / Template
- ❑ Thickness gauge
- ❑ Watt / Power Meter

7.4 Video Generator test sequence

Will be defined by TVI or its subcontracted quality providers.

7.5 Analog input

Analog input R,G,B level:	0 - 850 mV max.
Polarity:	positive, negative
Impedance:	75 Ω ± 1%
Sync:	HV separate sync, composite sync,

7.6 Optical response time

Video Bandwidth:	165 MHz (dot rate)
Typical rise time	5 ms

7.7 Protection circuit

The monitor will not be damaged by:

- ❑ missing vertical or horizontal sync pulse
- ❑ improper vertical or horizontal sync pulse (picture must be black at improper signals, unsynchronized pictures are not allowed)

7.8 DDC

The monitor can support DDC 2 B and DDC-CI according to the latest VESA standard.

7.8.1 DDC Details

1	User visible strings on .inf file	Philips 200VW (20" LCD MONITOR 200VW8)
2	Manufacturer ID (EDID data)	PHL
3	Product ID, "xxxx" 4 codes	MSB(byte 12): 08
		LSB (byte 11): 50
4	maximum resolution	1680x1050
5	Horizontal Frequency Range	30~93 KHz
6	Vertical Frequency Range	56~76Hz
7	Monitor Name (13 characteries max.)	Philips 200VW

7.9 Timings

Factory preset modes : 18
Preset modes : 45
User modes : 10

Note: 1. Screen displays perfect picture at 18 factory-preset modes.
2. Screen displays visible picture with OSD warning when input modes are the 45 preset modes.

Factory preset modes (18 modes)

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)	BW(MHz)
1	31.469	IBM VGA 10H	640x350	70.086	
2	31.469	IBM VGA 3H	720x400	70.087	
3	31.469	IBM VGA 12H	640x480	59.94	
4	35	MACINTOSH	640x480	67	
5	37.861	VESA	640x480	72.809	
6	37.5	VESA	640x480	75	
7	43.269	VESA	640x480	85.008	
8	35.156	VESA	800x600	56.25	
9	37.879	VESA	800x600	60.317	
10	48.077	VESA	800x600	72.188	
11	46.875	VESA	800x600	75	
12	53.674	VESA	800x600	85.061	
13	49.7	MACINTOSH	832x624	75	
14	56.4	-	960x720	75	
15	44.75	-	960x720	60	
16	48.363	VESA	1024x768	60.004	
17	56.476	VESA	1024x768	70.069	
18	60.023	VESA	1024x768	75.029	
19	61.08	IBM XGA-2	1024x768	75.781	
20	68.677	VESA	1024x768	84.997	
21		CVT 2.3MA	1280 x768	60	
22	60.289	CVT 2.3MA	1280 x768	75	
23	54.1		1152x864	60	
24	63.851	VESA	1152x864	70.012	

25	67.5	VESA	1152x864	75	
26	68.7	MACINTOSH	1152x870	75	
27	61.845	SUN WS	1152x900	66.004	
28	71.81	SUN WS	1152x900	76.15	
29	60	VESA	1280x960	60	
30	75	VESA	1280x960	75	
31	63.981	VESA	1280x1024	60.02	
32	71.691	SUN WS	1280x1024	67.189	
33	76	DOS/V	1280x1024	72	
34	79.976	VESA	1280x1024	75.025	
35	81.13	SUN WS	1280x1024	76.11	
36	91.1	VESA	1280x1024	85	
37	44.772	-	1280x720	60	
38	52.5	-	1280x720	70	
39	55.469	VESA-reduced blanking mode	1440x900	59.901	88.75
40	55.935	VESA	1440x900	59.887	106.5
41	70.635	VESA	1440x900	74.984	136.75
42	75	VESA	1600x1200	60	161
43	66.587	CVT 2.3MA-R	1920x1080	60.0 (for DVI-D	138.5
44	65.29	CVT1.76MW	1680x1050	60	146
45	65.29	CVT1.76MW-R	1680x1050	60	119

Remark: Timing which marked light blue are factory preset mode.

7.10 Audio Specification

N/A

8. DISPLAY PERFORMANCE

8.1 Picture performance

Optical performance test must be done in a dark room.
Note: Test under standard test conditions unless otherwise specified
Active Image Size (all modes)

8.2 Geometric defects

No vertical or/and horizontal line defect.
No cross line defect.

8.3 Picture stability during warm up

During 10 - 30 minutes warm up time from cold condition of the monitor
at ambient temperature (25°C ± 5°C) the decrease of brightness must be less than 6 Fl.

8.4 Scratches

No scratches and foreign particles visible.

8.5 Viewing angle

	Typical(10:1)
Horizental (Right + Left)	160°
Vertical (Up + Down)	160°

8.6 Jitter

No jitter visible in each condition. In case of problem a limit sample has to be defined.

8.7 Missing Pixels / missing subpixel

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200VW8
1 lit sub-pixel	3
2 adjacent lit sub-pixels	1
3 adjacent lit sub-pixels (one white pixel)	0
Distance between two bright dots	15mm
Bright dot defects within 20 mm circle	0
Total bright dot defects of all type	3

BLACK DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200VW8
1 dark sub-pixel	5
2 adjacent dark sub-pixels	2
3 adjacent dark sub-pixels (one white pixel)	1
Distance between two black dots	15mm
Black dot defects within 20 mm circle*	1
Total black dot defects of all type	5

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200VW8
Total bright or black dot defects of all type	5

8.8 Newton Ring

No Newton Rings visible.

8.9 Luminance Output

8.9.1 Luminance Output

Test resolution: 1680 x 1050 at 60 Hz
Test condition: video input (RGB) = maximum white

8.9.2 Brightness

To follow Panel specification. sRGB = 80 ± 10 nits.

8.9.3 Brightness uniformity

Set contrast at 100% and turn the brightness to get average above 300 nits at centre of the screen.
Apply the Fig 1, it should comply with the following formula:

$$\frac{B_min}{B_max} \times 100\% > 75\%$$

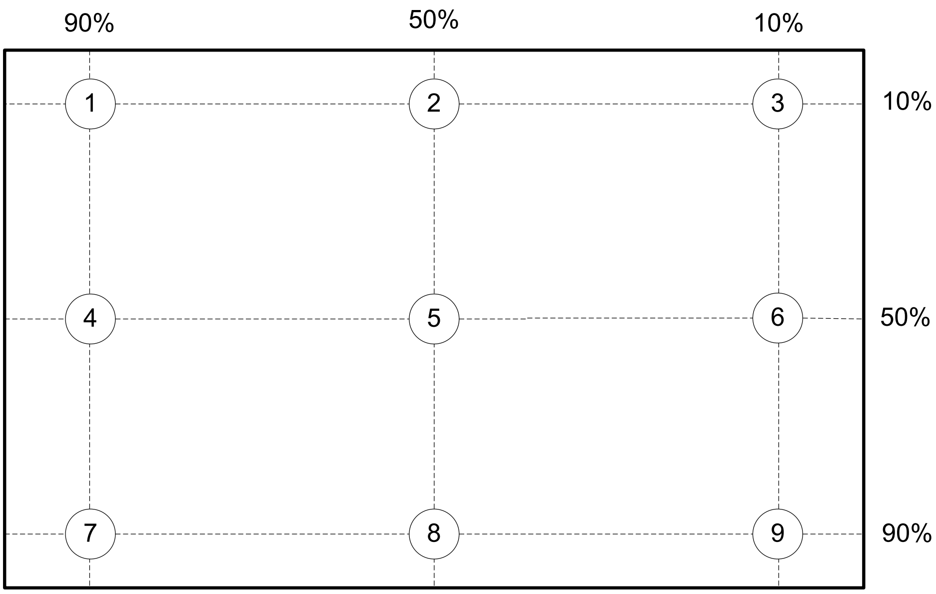
Where B_max = Maximum brightness
B_min = Minimum brightness

8.10 White Uniformity

Definition of White Variation (δ W):

Measure the luminance of gray level 255 at 9 points

δ W = Maximum [L(1), L(2) …… L(9)] / Minimum [L(1), L(2) …… L(9)]



Spec : =< 1.33 (In all ranges)

8.11 Contrast ratio

The contrast ration can be calculated by following expression.
Contrast Ratio (CR) = L255 / L0
L255 : Luminance of gray level 255
L0 : Luminance of gray level 0

Typical value: 1000:1

8.12 White color adjustment

There are three factory preset white color 9300K, 6500K, sRGB.

Apply full gray 64 pattern, with brightness in 100 % position and the contrast control at 50 % position.
The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:

Product spec.

9300K CIE coordinates	X = 0.283 ± 0.02 Y = 0.297 ± 0.02
6500K/ sRGB CIE coordinates	X = 0.313 ± 0.02 Y = 0.329 ± 0.02
sRGB CIE coordinates	X = 0.313 ± 0.02 Y = 0.329 ± 0.02

Production alignment spec.

9300K CIE coordinates	X = 0.283 ± 0.005 Y = 0.297 ± 0.005
6500K/ sRGB CIE coordinates	X = 0.313 ± 0.005 Y = 0.329 ± 0.005
sRGB CIE coordinates	X = 0.313 ± 0.005 Y = 0.329 ± 0.005

Quality Inspection spec.

9300K CIE coordinates	X = 0.283 ± 0.015 Y = 0.297 ± 0.015
6500K/ sRGB CIE coordinates	X = 0.313 ± 0.015 Y = 0.329 ± 0.015
sRGB CIE coordinates	X = 0.313 ± 0.015 Y = 0.329 ± 0.015

8.13 Distance between TFT LCD monitor and CRT/TFT monitor

Conducted with different modes or frequencies. No interference in a distance down to 25 cm.

9. <u>ENVIRONMENT</u>

9.1 Environmental characteristics

The following sections define the interference and susceptibility condition limits that might occur between external environment and the display device.

Operating
- Temperature : 0 to 35 degree C
- Humidity : 80% max
- Altitude : 0-3658m
- Air pressure : 600-1100 mBAR

Storage
- Temperature : -20 to 60 degree C
- Humidity : 95% max
- Altitude : 0-12192m
- Air pressure : 300-1100 mBAR

Note: recommend at 5 to 35°C, Humidity less than 60 %

10. REGULATORY STANDARDS

Note: All certificates must be raised under the name of Philips

10.1 Safety approvals

- ☑ CB report
- ☑ CE
- ☑ TUV GS
- ☑ TCO'03

10.2 Power management

- ☑ Energy Star

10.3 Certificates, Reports for the production start

When the first production of the monitor starts the following documents must be sent to Philips by mail. All reports must be raised under "Philips" and have to show W0ZR model name .

- ☑CB report
- ☑CE
- ☑FCC
- ☑Service manual

11 RELIABILITY

11.1 Reliability of the monitor

The MTBF of the monitor has to be greater than 50.000 hours. The MTBF shall be calculated according to the MIL Standard HBDK 217 E/F. The report about the calculation detail shall be provided on component level before mass- production by TVI. The calculation shall be performed for a primary test/preset mode under ambient temperature of 25°C.

12. CUSTOMIZATION

12.1 Identity Customization

Refer to SKU

12.2 EAN /SAP Identification

Refer to SKU

12.3 Plastic

The plastic material of the monitor must be PC-ABS (Front/ back) ABS-HB (base).
Plastic type and color is released as follows:

Refer to MakeUp sheet/ Graphic sheet

12.4 Definition of serial number

Refer to Philips' definition

12.5 Definition of the barcode label

Refer to Philips' definition

12.6 Accessories

Refer to SKU

13. ECR-HANDLING

Not any change without approved ECR.
Every ECR to the golden " samples" must be approved by PHILIPS, Even ECR for minor changes must be released by PHILIPS.
For the ECR procedure the vendor has to send an ECR formular, necessary spec updates, datasheets and a photo documentation. On based on documents, PHILIPS has to decide if samples are necessary till release to changes. The vendor also has to proof be certificates and test reports, that the change has no effect on safety, EMI and TCO03.
After testing, PHILIPS has to release or reject the change request.

Safety Check Process

Safety Checks

After the original service problem has been corrected, a complete safety check should be made. Be sure to check over the entire set, not just the areas where you have worked. Some previous service may have left an unsafe condition, which could be unknowingly passed on to your customer. Be sure to check all of the following:

Fire and Shock Hazard

1. Be sure all components are positioned in such a way as to avoid the possibility of adjacent component shorts. This is especially important on those chassis which are transported to and form the service shop.
2. Never release a repaired unit unless all protective devices such as insulators, barries, covers, strain reliefs, and other hardware have been installed in accordance with the original design.
3. Soldering and wiring must be inspected to locate possible cold solder joints, solder splashes, sharp solder points, frayed leads, pinched leads, or damaged insulation(including the accord). Be certain to remove loose solder balls and all other loose foreign particles.
4. Check across-the-line components and other components for physical evidence of damage or deteriortion and replace if necessary. Follow original layout, lead length and dress.
5. No lead or component should touch a receiving tube or a resistor rated at 1watt or more. Lead tension around protruding metal surfaces or edges must be avoided.
6. Critical components having special safety characteristics are identified with ans bythe Ref.No in the parts list and enclosed within a broken line *(Where several critical components are grouped in one area) along with the safety symbols on the schematic diagrams and/or exploded views.
7.When servicing any unit, always use a separate isolation transformer for the chassis failure to use a separate isolation transformer may expose you to possible shock hazard, and may cause damage to servicing instruments.
8. Many electronic products use a polarized ac line cord(one wide pin on the plug). Defeating this safety feature may create a potential hazard to the service and the user. Extension cords which do not incorporate the polarizing feature should never be used.
9. After reassembly of the unit, always perform an leakage test or resistance test from the line cord to all exposed metal parts of the cabinets. Also check all metal control shafts(with knobs removed), antenna terminals, handles, screws, etc. To be sure the unit may be safety operated without danger of electrical shock.
* Broken line

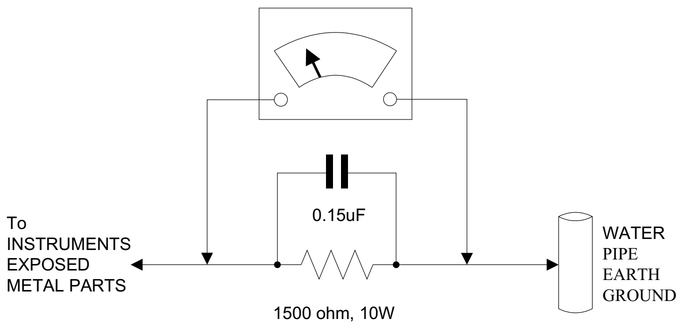
Implosion

1. All picture tubes used in current model receivers are equipped with an intergral implosion system care should always be used, and safety glasses worn, whenever handling any picture tube. Avoid scratching or other wise damaging the picture tube during installation.
2. Use only replacement tubes specified by the manufacturer.

X-radiation
1. Be sure procedures and instructions to all your service personal cover the subject of X-radiation. Potential sources of X-rays in TV receivers are the picture tube and the high voltage circuits. The basic precaution which must be exercised is to keep the high voltage at the factory recommended level.
2. To avoid possible exposure to X-radiation and electrical shock, only the manufacturer's specified anode connectors must be used.
3. It is essential that the service technician has an accurate HV meter available at all times. The calibration of this meter should be checked periodically against a reference standard.
4. When the HV circuitry isoperating properly there is no possibility of an X-radiation problem. High voltage should always be kept at the manufacture, rated value-no higher- for optimum performance. Every time a color set is serviced, the brightness should be run up and while monitoring the HV with a meter to be certain that the HV is requation correctly and does not exceed the specified value. We suggest that you and your technicians review test procedures so that HV requation are always checked as a standard servicing procedure, and the reason for this prudent routine is cleanly understood by everyone. It is important ot use an accurate and reliable HV meter. It is recommended that the HV recorded on each customer's invoice, which will demonstrate a proper concern for the customer's safety.
5. When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, reduce the line voltage by means of a variac to bring the HV into acceptable limits while troubleshooting. Do not operate the chassis loner than necessary to locate the cause of the excessive HV.
6. New picture tubes are specifically designed to withstand higher operating voltages without creating undesirable X-radiation. It is strongly recommended that any shop test fixture which is to be used with the new higher voltage chassis be equipped with one of the new type tubes designed for this service. Addition of a permanently connected HV meter to the shop test fixture is advisable. The CRT types used in these new sets should never be replaced with any other types, as this may result in excessive X-radiation.
7. It is essential to use the specified picture tube to avoid a possible X-radiation problem.
8. Most TV receivers contain come types of emergency" Hold Down" circuit to prevent HV from rising to excessive levels in the presence of a failure mode. These various circuits should be understood by all technicians servicing them, especially since many hold down circuits are inoperative as long as the receiver performs normally.

Leakage Current Cold Check

1. Unplug the ac line cord and connect a jumper between the two prongs of the plug.
2. Turn on the power switch.
3. Measure the resistance value between the jumpered ac plug and all exposed cabinet parts of the receiver, such as screw heads, antennas, and control shafts. When the exposed metallic part has a return path to the chassis, the reading should be between 1 megohm and 5.2 megohms. When the exposed metal does not have a return path to the chassis, the reading must be infinity. Remove the jumper from the ac line cord.



Leakage Current Hot Check

1. Do not use an isolation transformer for this test. Plug the completely reassembled receiver directly into the ac outlet.
2. Connect a 1.5k, 10w resistor paralleled by a 0.15uf capacitor between each exposed metallic cabinet part and a good earth ground such as a water pipe, as shown above.
3. Use an ac voltmeter with at least 5000 ohms volt sensitivity to measure the potential across the resistor.
4. The potential at any point should not exceed 0.75 volts. A leakage current tester may be used to make this test; leakage current must not exceed a possibility of shock hazard. The receiver should be repaired and rechecked before returning it to the customer.
5. Repeat the above procedure with the ac plug reversed.(note: an ac adapter is necessary when a polarized plug is used. Do not defeat the polarizing feature of the plug.)

Picture Tube Replacement

The primary source of X-radiation in this television receiver is the picture tube. The picture tube utilized in this chassis is specially constructed to limit X-radiation emissions. For continued X-radiation protection, the replacement tube must be the same types as the original, including suffix letter, or a Philips approved tube.

Parts Replacement

Many electrical and mechanical parts in Philips television sets have special safety related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components r=ated for higher voltage, wattage, etc. The use of a substitute part which does not have the same safety characteristics as the Philips recommended replacement part should in this service manual may create shock, fire, or other hazards.

WARNING: Before removing the back cover, turn the unit OFF and short the HIGH VOLTAGE to the ground.